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# SOME NEUROLOGICAL AND PSYCHOLOGICAL ASPECTS OF SHOCK[1]

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## I. Introduction

The word "shock" is one which is loosely used for the disturbing effects both bodily and mental of almost any sudden and intense experience. With such a wide range of signification it is hardly to be expected that all the cases to which the term has been applied can be reduced to a single homogeneous class, and in the following notes that has not been attempted. The effort has been rather to gather together examples of the different sorts of conditions to which the word is applied with something of their antecedents and consequences, with a view to a first tentative survey.

It has long been known that stimuli continuously applied or slowly varied produce little or no effect. It is also well known that sudden changes, both positive and negative, if of any considerable amount, are very efficient excitants, as for example, the sudden withdrawal of a light, rapid alteration of temperature, an unexpected noise, or the sudden cessation of a monotonous sound. So far as known some alteration in the continuity of stimuli is necessary for perception and, in all probability, also for consciousness.[1] Within certain limits, sudden alterations in the intensity of stimuli are necessary for normal psychical life. Below the lower limit of change, we have no response; above the upper limit, especially when the stimuli are also intense, we have mental and physical disturbances.

For the production of shock a tolerably intense excitation, as well as sudden change, is usually necessary and it is, therefore, with those forms of excitation that are at the same time both sudden and intense that these notes are especially concerned. A common element of intense and sudden stimuli, and one of great importance, is the difficulty of making the complete preadaptations which are necessary for normal and well coordinated reactions. The absence of these leads to, or, at any rate, intensifies the emotional and motor disturbances.

### 1. Intense Stimuli in Reaction-Times

A special case showing the importance of this factor of preadaptation is to be found in the laboratory experiments on

[1] *Cf.* Spencer: Principles of Psychology, Vol. I, Pt. ii, Chap. 2. For a biological aspect of shock see De Vries, Evolution and Mutation, *Monist*, Vol. XVII, 1907, p. 13.

reactions to stimuli of considerable intensity.[1] A maximum reaction time is usually found when the stimuli are of minimal intensity. As the stimuli rise above the threshold, the reaction time at first decreases rapidly, then slowly or not at all. When, however, the stimuli become very strong, the time of reaction is again lengthened materially. This last is evidently an inhibitory phenomenon connected with shock or the emotion of fright, and the disturbance of the co-ordination proceeding from these. It is also a well-known fact of attention that when an impression has reached a strength favorable for apperception a further increase produces no further acceleration in its comprehension. Within certain limits weaker and stronger impressions are clearly and distinctly apperceived. When, however, the stimulus is too strong the existing condition of attention is not adequate to the impression.

### 2. Gradual Changes in Stimuli

In this connection, also, we may give a few words to the experimental work done on the effect of gradual change of stimuli. Fontana applied pressure to an excised motor nerve until it was crushed without causing its muscle to contract. Afanasieff and Rosenthal increased and decreased the temperature stimuli applied to a motor nerve with such regularity that no action resulted. Ritter found that the electrical current has no effect if the density of the current is made to vary slowly enough. Acid and alkaline stimuli have been applied with such uniformity as to kill the tissue without exciting movement.[2] Frogs have been placed in water and the water heated so slowly as to produce death without the animal moving. Sedgwick,[3] experimenting with frogs, came to the following conclusions: If the heating be sufficiently gradual, no reflex movements will be produced even in the normal frog. The same was observed in the case of a reflex-frog, if the change was sufficiently gradual. Both the reflex and normal frog made violent movements when the rise in the temperature was somewhat more rapid. The author also concludes that death was not due to a diminished irritability of the spinal cord by reason of the heat carried into it by the blood. Nervous protoplasm must be altered rapidly in order to secure excitation and it is impossible for organs with a protoplasmic basis to avoid this law.

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[1] Wundt: Grundzüge der Physiologischen Psychologie, 5th ed., Vol. III, 428-430.

[2] Cited by Hall and Motora, *Am. Jour. Psy.*, I, 72 ff.

[3] Studies from the Biological Laboratory, Johns Hopkins Univ., 1882, p. 385.

Hall and Motora a number of years ago made a series of experiments on dermal sensitiveness to gradual pressure changes[1] and similar experiments have since been made by others. In such experiments the acts of comparison and judgment must go on during the process of the change. It was reported by the subjects in the experiments of Hall and Motora that the mind did not have or keep at any time an image or feeling of continuous increment or decrement. Continuity here is derivative and inferred from the graduated series. Gradual changes, though great in amount, could only be ascertained by indirect and often very circuitous inference. For each individual there is a practical threshold of change as well as of intensity, which relieves the mind from many distractions and irrelevancies and favors concentration of attention.

Experiments in which a point was moved over the surface of the skin[2] revealed the same general relations. It has been found possible to move a point so slowly over the surface of the arm that no motion is perceived.

All these facts go to show that stimuli to be effective must have an adequate intensity together with an adequate rate of change, the latter determined in some degree by the experience of the organism. But this limit may be exceeded both in intensity and in rate of change, with imperfect perception, overexcitation or shock as the result.

## II. Theories of Shock and Conditions that Influence its Intensity

### 1. Somatic and Psychic Shock

On the side of *causation* shocks may be grouped roughly under two general heads, those in which a somatic factor is prominent and those of more purely psychic origin. The shocks of the first sort result from injuries and surgical operations of various kinds. The shocks of the second sort result from sudden emotional disturbances such as the receiving of good or bad news, disappointment or fright on seeing an accident. In reality, however, a psychic factor is very often present in the somatic cases, and on the side of *effects* it is not easy to distinguish the two sorts. Both produce extreme nervous prostration, lowered vitality, enfeebled circulation, disordered metabolism and defective elimination. The vitality of the phagocytes seems to be lowered and the catabolic action of the nerve centres is exaggerated. There is an excessive increase in the waste products. In a word both somatic and psychic shocks result in similar pathological disturbances of the

[1] *Am. Jour. Psy.*, Vol. I, pp. 72 ff.
[2] Hall and Donaldson: *Mind*, Vol. X, 1885, pp. 557-572.

mind and body. People who do not receive any local injury in an accident, but who do experience a serious psychic shock, often suffer from prolonged neurotic disturbances. In such cases grave symptoms may develop and recovery is delayed. The psychic shock has caused a derangement of metabolism, which in turn reduces the nervous tone. The patient is, by this process, thrown into a vicious circle. Yet in spite of this similarity of symptoms, frequent combinations, and perhaps fundamental identity in severe cases, it has seemed advisable to treat the two to some extent separately, and we shall consider first shocks of physical and afterwards those of mental origination.

For detailed accounts of cases of shock due to physical injuries it is only necessary to refer to the copious literature furnished by surgeons and attending physicians in the case of accidents from which it is unnecessary that we should quote here. Let us rather consider the several theories of shock which have been based upon clinical observation.

## 2. THEORIES OF SHOCK

a. *The Hemo-Pathological Theory.*[1] Gross would say that shock depresses the vital powers because of a loss of innervation. Agnew asserts that the determining cause of shock must reach that portion of the nervous system from which the heart and lungs receive their motor innervation, for the feeble action of those organs is one of the first phenomena of that condition to be observed. Blum believes that shock is a reflex irritation of the pneumogastric nerves, which causes the arrest of the action of the heart. Schneider holds a theory of vaso-motor paralysis. There is at first a contraction of the blood vessels, soon followed by a dilatation. This latter causes the veins to fill with blood and prevents much of it from returning to the heart. The heart then becomes unable to force this diminished supply through the arteries. These writers base their theory of shock on the classical experiment of Goltz performed in 1870. He tapped the mesentery of a frog with the handle of his scalpel and observed that the heart was suddenly stopped. In a few minutes the beating was resumed, but there was a diminished flow of blood in the aorta. In this case there was a vaso-motor paralysis caused by mechanical violence.

Recently Crile has performed two long series of experiments to ascertain the effects of surgical shock. He has been able to demonstrate that all shock is accompanied by a high blood pressure at first which is immediately followed by a low blood pressure and perhaps death. He asserts that the source of

[1] Crile: Surgical Shock. Lippincott, Philadelphia, 1899. pp. 9-13.

shock is the paresis of the vaso-motor mechanism. This paresis interferes with the blood pressure and the general circulation, resulting subsequently in disturbance of a reflex and nutritional sort. By the use of the Riva-Rocci sphygmomanometer the blood pressure is found to drop rapidly some time before any disturbance in the circulation can be detected through the pulse. This drop in the pressure of the blood is the warning signal of approaching shock. This fact has been demonstrated many times by surgeons in practical work.

Brewer[1] commends this view and asserts that all recent observations point to the fact that surgical shock is due to a breaking down of the delicate vaso-motor mechanism which controls the dilation and contraction of the capillaries, and the capillaries rule the blood pressure in the body. These observations show that the muscles of the heart are not exhausted. They do not demand stimulation. There is no lack of power in the heart to drive the blood through the arteries. But the dilation of the capillaries causes an accumulation in certain parts of the body and causes a disturbance in the circulation. The blood does not return to the heart and its action is disturbed by the lack of blood on which to exert its force. But the capillaries are already over stimulated and exhausted. Crile, then, believes that shock is a vaso-motor dilation owing to a paralysis of the vaso-motor nervous mechanism.

b. *The Neuro-Pathological Theory.* Groenigen proposed this theory and its pith is found in the following quotation which he makes from Astly Cooper: "Extensive injuries cause death by their sympathetic influence and the great shock on the nervous system, even if there be no vessel reaction nor inflammation." According to this theory there is a breaking down of the nervous elements. There is a consumption of energy and probably a disarrangement of the molecular particles. It is well known that there is a chemical change in the nerve elements and a decrease of irritability after excessive stimulation. The degree of exhaustion is proportional to the duration and intensity of stimulation. In the highest degrees of irritation all sensibility is destroyed either temporarily or permanently. Intensive light blinds and excessive sound deafens. If the kidneys of an animal are pressed, there is at once a paralysis of both hind limbs and a loss of reflex action in them. This continues for some time after the pressure ceases. Groenigen argues that this condition was brought about by the violent irritation of sensory nerves, which caused paralysis of the motor centres in the spinal cord, an exhaustion

[1] Brewer: Proceedings of Harvard Med. So., *N. Y. Med. News*, June, 1903.

of the reflex centres and also a paralysis of the automatic centres of the brain.[1]

The consuming of the nervous energy at any moment may cause a violent and sudden irritation of the peripheral or sympathetic nerve fibres spreading to distant points and eventually producing general exhaustion or unconsciousness. The best confirmation of this theory is the work done by Hodge[2] on the microscopical alterations in nerve cells at rest and in fatigue. He found that the nucleus of nerve cells, fatigued by direct stimulation or ordinary work, decreased in size, became irregular in contour, and stained darker. There was a shrinkage in the cells of the cerebrum and of the cerebellum, with an increase in the pericellular lymph-spaces. The cells of the spinal ganglia decreased in size and showed vacuolation.

Warren adds this sentence in comment: "These interesting results seem to throw new light upon the condition of the ganglia of the cord and medulla in the condition known as shock, and render the supposition highly probable that in this profound disturbance similar changes may be found which may gradually disappear after an interval of rest."[3]

To summarize Groenigen's[4] view, shock is not the consequence of an excitation of the vagus or the effect of a simple paralysis of the heart. All reasons brought forth in the support of this view are untenable and contradict directly the phenomena of shock. The hypothesis that shock is the result of a contraction of the small arteries is in want of proof. The same is true of the assertion which refers it to the change in the composition of the blood. The only tenable and comprehensive hypothesis is the one which addresses itself to the entire territory from which the phenomena, coming into consideration, arise. Accordingly shock is an exhaustion of the medulla oblongata and the spinal cord—an exhaustion which results from the excessive irritation.[5]

In some cases, especially when there are wounds of the head, fine anatomical changes in the nerve substance take place.

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[1] Crile: Surgical Shock. Lippincott, 1899, pp. 9-13.

[2] Hodge: Changes in Nerve Cells. *Journal of Morphology*, Vol. VII, 1892, pp. 158-159.

[3] Warren: Surgical Pathology and Therapeutics. Saunders, Phil., 1895. p. 285.

[4] Groenigen: Ueber den Shock. Wiesbaden, 1885. p. 263 *et. seq.*

[5] Meltzer: Johns Hopkins Press, 1900, pp. 135-151, has found that the shaking of the red corpuscles of the blood produces an injurious effect upon them. The effect was noticed soon after the shaking had ceased. The destruction of the red cells is due, the author affirms, to a molecular shock and not to a gross injury. It may be asked why excessive excitation would not have a similar effect on the nerve cells.

This is by Strümpell connected with shock, and Bruns[1] has found in man finely scattered spots of degeneration in the vicinity of the large bruised places of the medulla. In other cases arterioscleroses are developed especially in the vessels leading to the brain. Some neuroses may appear, however, without any material changes in the nervous system resulting from the disturbances.[2]

Henderson[3] in his experiments has come to the following conclusions: The development of shock in surgical operations and injuries is not dependent upon the extent of the injuries and the intensity of the stimulations of afferent nerves, but upon the rate of pulmonary ventilation. He presents the hypothesis that acapnia is the cause of surgical shock. Acapnia is the cause of the disturbance of the circulation and of the nervous system and explains the cessation of respiration in apnoea vera. There is a sudden diminution of $CO_2$ in the arterial blood which probably acts on the centres of the spinal-bulb, and increases the heart-rate up to the point of cardiac tetanus. The prevention of acapnia by artificial respiration prevents the development of shock. This was found to be true even when the period of observation lasted all day.

c. *Amœboid Movements of the Neuroglia Cells.* Erichsen in 1868 urged that there was a disarrangement of the molecular structure of the spinal cord and that there was no alteration in the blood supply. This was a pioneer explanation in a new field and was accepted as reasonable for a number of years. Hodges, however, in 1880 denied the pathological entity theory of Erichsen and suggested the possible functional character of many of the symptoms. In recent years there has been much controversy among the neurologists regarding the anatomical changes that take place in a condition of shock.

One of these current theories is based on the supposed amœboid movement of the neuroglia cells.[4] Amœboid movements have two phases, one of expansion and the other of contraction. In the first condition the actual amœba changes its place, takes food, and contracts when it is touched, jarred or otherwise stimulated. A strong thermal, chemical, or electrical stimulus produces, however, a general contraction with the result that the animal presents but a small surface to danger.

The neuroglia cells of the gray substance show all stages of

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[1] Bruns: Die Traumatischen Neurosen. Wien, 1901. p. 28.

[2] See Marinesco, Lésions produites sur la cellule nerveuse par l'action directe des agents traumatiques. *Revue de Psychiatrie et de Psychologie Expérimentale.* Tome XII, Mai, 1908, pp. 177-193.

[3] Henderson: *American Journal of Physiology*, Vol. XXI, pp. 126-156.

[4] Hall: *Am. Jour. Psy.*, Vol. VIII, pp. 198-201.

retractions and relaxation. In the former case the protoplasm in the cell body increases, the main processes grow short and thick, and the secondary processes vanish. These contractile cells are found most abundantly in the molecular layer. Here, also, the fibrillar contacts of the specifically nervous cells are thickest. In the relaxed state the processes of the neuroglia cells pass between the tips of the dendrites of the nerve cells and thus break their mutual contacts. In the contracted state the protoplasm of the secondary processes of the neuroglia cells is retracted and a contact is made again between the tips of the dendrites. The neuroglia cells, by their movements, become automatic, shunting and isolating agents. In case of a vigorous contraction of these cells new connections may be made and old ones are perhaps broken. On this basis, Hall[1] has suggested that new associations are formed and monoideistic concentration of attention appears. This theory seeks to give a physical basis for all mental activity, both normal and abnormal. It seeks to account for sleep, fatigue, insistent ideas, confusion and all other mental phenomena. Everything is connected with the contractions and relaxations of the neuroglia cells. Hall suggests that if movements like those above do attend normal psychical activity, we are surely justified in inferring that strong shock, which is the most drastic of all experiences, must greatly increase them. The movements may cause a change which obliterates some associations and intensifies others and breaks up old ones. The method of reacting may be changed, and a basis laid for many disorders such as impulsive acts and imperative ideas. The wrong or even antagonistic muscles may be innervated. The vaso-motor and the splanchnic nerves may be disturbed, stuttering, sudden rigidity, exhaustion and paresis may appear. The brain may have been modified by these strong and sudden experiences, and become responsive to particular forms of shock.[2]

While the assumption of the movement of neuroglia cells would explain many and perhaps all phenomena of shock, yet the anatomical evidence for these movements is not very strong. In fact, Schiefferdecker[3] denies that there is any movement in the neuroglia cells. He admits the possibility of movements in the contact granules of the dendrites, but without signifi-

[1] Hall: *Am. Jour. Psy.*, Vol. VIII, p. 200.

[2] Cajal and others have suggested that the free terminations of the nerve cells themselves have power to perform amœboid movements and in sleep or during shock by their retraction break the connections with neighboring cells, thus bringing about actively a result which is produced in them passively by the movements of the neuroglia cells if the hypothesis just considered is correct.

[3] Schiefferdecker: Neurone und Neuronenbahnen. Leipzig, 1906. pp. 237 *et seq.*

cance for the interconnection of the nerve cells. The forms which are observed are probably important only for metabolism of the cells and the question of movement in the contact granules should itself be left open, though he is, at this time, inclined to the opinion that there is no movement. But the work of Goddard [1] seems to confirm the amœboid movement theory. He found that, in sleep, the contact granules were absorbed into the dendrite; but in the active state, the granules spread out on stems. In rest the dendritic processes become varicose and the protoplasm seems to flow together, thus breaking the connections. Recently Harrison [2] has shown that the developing nerve fibre retains its amœboid activity at the distal end. These amœboid movements of the nerve cells in the embryo would, at least, render more plausible the above theory.

d. *Disturbance of the Synapse.* The recent work of Sherrington [3] throws some light on this problem. He has found that spinal shock appears to take effect only in the aboral direction. Sections made below the brachial enlargement disturb the upper limbs little or not at all. Transections made at the lower edge of the fifth cervical segment result in very little or no depression of the phrenic motor cells even momentarily. The depression is profound on the aboral side of the transection. The brain is very little disturbed and perhaps not at all by the cutting off of the stream of centripetal impulses going to the encephalon from the cutaneous, articular and muscular sense organs of the tail, limbs, trunk and neck, and from the viscera. None of these impulses can now receive conscious or subconscious elaboration. The animal directs his gaze steadily on things seen through the window. If the transection take place below the brachial region, the animal may amuse himself by catching flies. It has been observed that in the case of certain worms when cut in two suddenly, the head end goes on undisturbed, while the rear end is violently contorted. The aboral direction of shock appears to be universal in the nervous system. When, however, the transection is made as far forward as the first cervical level there is a tendency for the animal to drop off rapidly to sleep. This is perhaps due to the fall of blood pressure and body temperature. The head does not participate in the shock, but it does participate in the lowered pressure of the blood after transection in the front of

[1] Goddard, H. H.: *Journal of Comparative Neurology*, Vol. VIII, 1898, pp. 245-247.

[2] Harrison, R. G.: *American Journal of Anatomy*, Vol. VII, pp. 116-118.

[3] Integrative Action of the Nervous System, Scribner, 1906, pp. 250-248.

the second thoracic level. Shock, however, is not entirely due to the fall of arterial pressure.

It is the number and character of the descending nerve paths through which the lesion breaks that determines the shock resulting from trauma. Spinal shock is not a phenomenon of inhibition. Reflexes during the depression of spinal shock do not resemble those of inhibition so much as those of fatigue. The scratching reflex under shock depression has the same characteristics as reflexes when the animal is very tired, in fact, almost exhausted. Conduction along the paths of the reflex-arc is rendered difficult and uncertain. *This would suggest that there is a loosening of the connections of the links forming the neuron chain of the reflex-arc.*

In brief, Sherrington does not attribute shock to irritation resulting from trauma nor does he believe that it is a phenomenon of inhibition. It results from the rupture of certain aboral conducting paths; but the definite paths have not yet been made out. He has also shown that spinal shock is most effective on those tissues which waste most when the synaptic nervous system is destroyed. In most cases the skeletal muscles are involved. The primitive diffuse nervous system, the nerve net, is not so deeply influenced as the visceral and vasomotor systems. The organs on which shock falls least heavily are those which suffer least even after exsection of the spinal cord itself.

Drawing from the best evidence at hand, we may say in summary that shock seems to cause physically an excessive catabolic action of the nerve cells, resulting in an alteration of their nutritional condition or in some chemical change in the substance of the axis cylinders. The excessive stimuli may change the conductivity of the synapse or cause movements in the neuroglia cells or dendritic processes.

e. *Prince's Theory.* So far we have been considering chiefly shocks due to bodily injuries, though, as we have said, the bodily and mental results are, in most cases, inextricably mingled. In the present section, we shall take up very briefly shocks due to psychical causes.

Prince[1] believes that the real causal factor of accident neuroses is the psychical or emotional element. He believes that the physical concussion plays a part only in intensifying the emotional effect. A sudden noise close to our ear startles us. But if the noise is accompanied by a slap on the shoulder, the effect is increased. For the psychical factor of shock to become effective, it is necessary that there be a certain unpre-

[1] Prince: *Boston Medical and Surgical Journal*, Vol. XXXVII, pp. 392-394.

paredness of the mind. Prince has made inquiry into the consequences resulting from blows received in playing football. He finds very few cases of accident neuroses credited to injuries received while engaged in the game.

There are two reasons why traumatic neurasthenia or hysteria does not follow from concussions of this sort. In the first place there is an intense mental excitement and concentration of thought upon the game. These dominate the mind of the player and crowd out all other forms of mental excitement. In the second place the player goes into the game with a mental preparedness, or "negative expectation." He is perfectly well aware that an accident may result and has made up his mind to it. No surprise or terror is present just before or at the time of the accident. He feels sure that there is little or no danger to life. But in railway accidents, earthquakes, explosions, cyclones and conflagrations the situation is entirely different. The mind immediately before the event is wholly unprepared for it; and in addition past experience and the reports of others have led to the expectation of horrible consequences. There is a critical moment of expectation in every such disaster. A previous auto-suggestion becomes effective, and on the first intimation of an accident this idea, formerly prepared, arises and with it the terror and shock.

Page[1] in discussing shock resulting from railway accidents asserts that its effects are much more serious if the injury is accompanied with fear. The person injured in a railway accident frequently suffers more serious collapse than one seriously injured by other means. The suddenness of the accident, the helplessness of the individual, the great noise, the hopeless confusion, the cries of the injured, all aid in producing a profound impression on the nervous system. The principal feature in railway injuries is the combination of the physical and mental elements of causation of shock in such a manner that the psychical element is always present in its most violent form.

*3. Conditions Influencing the Degree of Shock.* The number of reflex symptoms following a case of trauma depends on the specialization of nerves and their abundance in the injured part. Wounds of the skin cause more shock than deep wounds of the muscles or bones. Shock is likely to be extensive when a large superficial area of the skin is injured, even though the wound does not go very deep. Wounds of the nervous system and manipulations of the nervous substance are likely to be followed by considerable shock. Interferences in the pyloric region of the stomach and the neighborhood of the gall-bladder produce serious shock.

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[1] Page: Injuries of the Spine and Spinal Cord. Blakiston, 1885, 2nd, p. 190.

General conditions are also important. The same injury or fright produces different degrees of disturbances in different individuals and in the same individual at different times. Women as a class are less susceptible to shock than men. Persons inured to suffering or confined to the bed for a long time, or under the influence of certain drugs, seem to have acquired a certain torpidity of the nervous energies and are less susceptible to shock than persons whose nervous systems are in a high degree of activity.

The apathy of the aged and of those in extremity from exhausting disease, has often been remarked. Their store of nervous energy is too low to cause perceptible agitation.

Temperament is said to modify the manifestations of shock. Phlegmatic and lymphatic temperaments resist it. Sanguine and mobile temperaments are liable to it in the highest degree. Mental conditions also modify it. Mapother has pointed out that the Saxon and Celtic races differ in their power to withstand shock and he believes that the statistics show that the English bear severe operations better than the Irish. But the secondary complications are more frequent in the first. A comparison of the German and French statistics show that the nervous Celts have a higher percentage of cases of death after operations than the Germans. Other influences, however, may well have played a co-ordinate, if not predominant rôle here. According to Brinton, the mentally elastic Irish and the more phlegmatic Germans, bear operations better than the restless Americans.[1]

Fear, despair, despondency, disappointment, depressed mental states of any kind aggravate it. While hope, joy, cheerfulness, glad expectations, and success, diminish its effects.[2] Shock is modified by age. While the young bear injuries better and usually rally more readily than older persons, and organic diseases in the aged often make their effects serious and prolonged in the absence of disease, the duller nervous susceptibility of those advanced in years may diminish their liability to shock.

The effects are always most marked, as Jordan believes, where nerve functions are highest in character and most intense in action.[3] The maximum is produced in the adult, whose will and ideas predominate over all the other functions. The

[1]Cited by Groenigen. Ueber den Shock. Wiesbaden, 1885. p. 100.

[2]This is especially true in the case of psychic shock. Toulzac (Rire et Pleurer Spasmodique, Paris, 1901. pp. 19-20.) cites the following incident. A group of boys and girls from nineteen to twenty-four years old were seated together when news was received of the death of a friend of the group. They looked at each other for a second and then broke out into a laugh. It was some time before they could realize the seriousness of the news.

[3]Jordan: Surgical Inquiries, London, 1873. 2d ed. p. 12.

minimum is found in the very young and in the feeble and old. Strong and healthy men die from a crushed knee, while others, bed ridden and worn out with pain, survive the amputation of the thigh. The lower the nerve force, the less the shock. Before birth, a fœtus will survive amputation of all the limbs; not so after birth. It has been found difficult to kill a hibernating animal. Miners and farm laborers, with somewhat blunted nerves, endure shock better than the skilled artisans. People, then, vary a great deal in the amount of unusual excitation, both somatic and psychic, they can endure without pathological consequences. This amount seems to have some relation, as we have seen, to age, sex, health, nervous energy and temperament. That degree which is injurious to one person, may be even enjoyed by another. And this fact has, no doubt, a high pedagogical as well as diagnostic value.

*Reactions of Children to Sudden and Intense Stimuli.* It has already been stated that children are less subject to traumatic shock than grown people; but observations show that they are more exposed to psychic shocks resulting from frights and strange phenomena. Sully[1] finds that visual sensations do not produce the strong shock effects on the nervous system that auditory sensations do. Loud and voluminous noises like the slamming of a door, give a shock to little children which is often the progenitor of excessive fear. The noise of a factory, the whistle of a steamship or a passing train, often causes great alarm or quite upsets a child. Sully cites the following instances. The bleating of the sheep caused a little girl of nine months to seek shelter against the nurse's shoulder; a boy of four months cried when he first heard a piano; a child of five and one-half months screamed when a banjo was played; and Preyer's boy at sixteen months was alarmed when a tone was produced by rubbing the edge of a tumbler. Swift[2] also found that for the first fifty days babies are very sensitive to auditory stimuli. Darwin found that his child, at sixty-six-days, was startled violently, frowned, looked frightened, and cried, as a result of hearing a loud sneeze. An hour later the child was in a state that would be called "nervous" in an older person. For some time every slight noise made him start. About the same time he was caused to start by the sight of an object; but for a long time noises made him start more than did visual impressions.[3] The unexpected and unknown play an especially important rôle in the child's

[1]Sully: Studies of Childhood. Appleton, N. Y., 1896. p. 194.
[2]Swift: *Am. Jour. Psy.*, Vol. XIV, 1903, p. 247.
[3]*Mind*, Volume II, 1877, p. 286.

experience of shock. Sounds coming from apparently silent things are uncanny. The unexpected has a disconcerting effect. The absence of visible cause is perplexing to the child and even perhaps to the animals[1] and produces alarm. It is so in a measure with us all. It is the new and mysterious suddenly brought into our presence, that shocks. By degrees we become accustomed to new sounds and impressions. Science has done much to make us acquainted with the causes of natural phenomena and consequently the occasions of shock have become fewer. Man is reducing and organizing the stimuli which formerly beset his psychic life and subjecting them to terms that may better be understood, and in the case of adults this process has gone far, but the most unexpected things may happen to children for their world is full of chance. In cases of arrested development in children, we often have a glimpse of what the ancient chaos of ignorance may really have meant. The commonplace things of science have had a sanifying influence on culture.[2]

## III. The More Enduring Effects of Shock.

1. *Sensory and Motor Disturbances following Shock.* The general sensory and motor effects of shock are the familiar ones of neurasthenia and hysteria—lessened or perverted sensibility and lessened or perverted power of movement.

*Vision.* In the case of shock, vision is usually disturbed. If the patient attempts to read the lines soon run together. There is a loss of the power of accommodation as a result of general weakness and depression which render any sustained effort difficult or impossible. It is often impossible to do minute work of any kind. The size of the pupil is affected. The two pupils may differ in size. The tone of the retina is low. In some cases light causes a sort of blinding, the flowing of tears and the closing of lids. Not seldom this aversion to light is connected with subjective light sensations, such as seeing balls of fire, stars, rays, or in contrast to these, dark spots. Féré,[3] Lehmann and Bleuler state that they have observed many instances of photopsia as a result of a shock (sudden, strong, stimulation) on some part of the body experienced in the dark. Faure has observed color blindness following in the wake of psychic shock.

*Hearing and Sense of Equilibrium.* The shock resulting from a fright has caused in young people the sudden loss of hearing. This sort of deafness is frequently not to be cured.[4]

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[1]Vignoli: Myth and Science. Appleton, N. Y., 1882. p. 55 *et seq.*
[2]Hall: Fears. *Am. four. Psy.* Vol. VIII, p. 197.
[3]Féré: Pathology of Emotions. London, 1899. p. 32.
[4]Féré: Pathology of Emotions. London, 1899, p. 248.

Hearing may, on the contrary, be made unusually acute. There may also be produced neurasthenic vertigo. The patient has the feeling that the earth is sinking under him and he is about to step into space. He knows that he is weak and fears that he will be taken for an intoxicated person.

*Anæsthesia.* From shock there often result anæsthesias of the skin and of the other sense organs. It is a characteristic of the dermal anæsthesias due to this cause, that they do not follow anatomical lines in their grouping, neither those of localization in the brain and spinal cord, nor those of the peripheral nervous system, but rather the naïve fancies of the patient. There is no crossing of the effects; they all remain on the same side as the wound. The anæsthesias are located directly on the injured member, where usually the other symptoms, as pain and paralysis, are present with greatest intensity. The anæthesias may be very different qualitatively. Not seldom they are absolute. One may then treat the affected portion of the skin and also the underlying tissues with great severity, (needle pricks, heat, or strong electrical current), without causing any reflex disturbance. In other cases only a partial anæsthesia exists. Up to a certain intensity painful stimuli will be endured, then pain sensations enter and a defensive movement takes place. In most cases all varieties of dermal sensation are affected and all equally blunted. There may, however, appear the loss of pain and temperature sensations, with the retention of those of touch; or the temperature sense alone may be lost. In some cases localization is lacking. The muscle and position feelings are seldom destroyed. Pain may be erratically located in other parts of the body and is frequently delayed in its appearance. It may, however, be severe in character, deep-seated in position and, from the absence of all external wounds, very obscure in origin.

*Stammering as the Result of Mental Shock.* As an example of the effects of shock on the more delicate motor-mechanisms we may take the disturbances of speech. Stammering may be caused by either somatic or psychic shock. Sikorski believes that psychic shock is more likely to result in this way than somatic. Out of 167 cases he reports that he found 27 cases which had been caused by fright. In another group of 102 cases reported by the physician of a military school, over 70% had resulted from fright. Oltuszewski has, however, reported 535 cases distributed in percentages among various causes as follows: Rapid speaking, 18%; Brain disorder, 2%; Imitation, 30%; Fright, 23%; Diseases, 10%; Constitutional diseases, 6%; Injury, 47%. The remainder were due to hereditary causes.[1]

[1] See Conradi: *Pedagogical Seminary*, Vol. XI, 1904, p. 357.

A single case reported by Behnke shows the effect in the concrete. A girl, aged eleven, was alone with her mother who died suddenly of heart failure. The shock rendered the girl speechless for hours. By degrees her voice was regained, but she stammered excessively with violent contortions. She was shy and timid and feared she would stammer if she attempted to speak. Great tact and care were used and she was prevented from becoming morbid regarding the matter. After treatment of the speech defect she was able to speak without fault unless worried or anxious.[1]

2. *Traumatic Neurasthenia.* We now turn to a somewhat more detailed consideration of nervous diseases sequent to shock —especially neurasthenia.[2] Neurasthenia often develops as the result of injury and shock and, when so developed, differs very little from neurasthenia resulting from other causes. For the details of the symptoms the reader is referred to the work of Bailey just cited. It is not frequent in the old and young but occurs oftener in the active period of life. Women are less subject to it than men. Nervous predisposition does not seem to be an essential factor. Accident appears to be the most important single causative agent. There is something about a railway accident in particular that favors its development, but it may result from other causes as well. The physical and psychical factors are very often associated. Perhaps the most favorable condition is a severe mental shock together with a rather vigorous shaking up. When fright alone produces such symptoms it is probable that the person was in an unstable nervous condition at the time of the accident. But as these neurasthenic conditions result from wounds received before the person knew there was any danger, the element of purely anticipatory fear would seem to be eliminated.[3] The gravity and duration of the symptoms may not be at all in proportion to the severity of the accident, but in general the more serious the accident the more refractory are the resulting neuroses.

Very little is known concerning the pathology of the trouble. Autopsies reveal no lesions sufficient to cause the symptoms. The nervous system, however, has not been examined with sufficient care for possible morbid appearances in the ganglion cells. Hodge and Lugaro have shown that there are visible alterations in the ganglion cells as a result of fatigue, and since fatigue is so prominent a characteristic of traumatic neurasthenia, it is natural to infer that there may be similar cellular disturbances. The onset of the trouble varies with the character

[1] Behnke: On Stammering. London, 1907, p. 21.

[2] Bailey: Accident and Injury, New York, 1900, p. 220 *et seq.*

[3] Anticipation of the consequences of an injury already received may, however, be an important factor. See above.

of the accident and the influences surrounding the patient before and after its occurrence. The latent period between the time of accident and the first appearance of neurasthenic symptoms varies in duration. Usually only a few days intervene but sometimes the period is extended to weeks. The condition of the patient may vary from fretfulness and querulousness to the borderland of insanity.

Fear is conspicuous but it rarely takes on a systematized form. All the circumstances relating to the accident are dreaded, but it is a very rare thing to find such a patient fearing any one particular thing, such as contamination or open places.

The sleep of patients suffering from traumatic neurasthenia is disturbed by fearful dreams. Perhaps after sleeping an hour the patient spends the remainder of the night walking the floor. In the morning he sleeps better. His dreams are seldom connected with the events of the shock.

*Fatigue in Traumatic Neuroses.* The lack of capacity for the usual amount of exertion required by the business of life is characteristic and is well shown in such cases as the following.

Mr. Pf., aged 42, was healthy until a fall on his head in 1900, from which he remained unconscious for a short time. The wound healed and in a few days he was again at his work. A change was soon noticed, however; he felt tired, irritable and apathetic. He became giddy, had attacks of hysteria and gave up his work. He was quiet and lived "as if in a dream." He was timid and had difficulty in comprehending. His fatigue was accompanied by a great reduction of mental and physical capacity. There was no improvement in 1907.[1]

Specht cites also another case. Mr. T., aged 49, had been healthy except that his lungs had been affected once for a short time. He met with a series of accidents in 1886, but he never became unconscious and was only temporarily kept from his work. The last accident occurred in 1901, at which time some bones in his face were broken. Since then he has had numerous nervous troubles. He has been depressed, tearful, irritable and timorous. He took no interest in those around him and was devoid of will power. He lost his capacity for work, became hysterical and showed an increased liability to fatigue.

The exact laboratory studies of fatigue in cases of traumatic neuroses have usually shown that such patients are very susceptible to it. Their capacity for work and their power of recovery from its effects have both been greatly reduced. Their capacity to improve by practice is also impaired, the effects of practice disappearing very rapidly. In certain experiments

[1]Specht: *Journal of Mental Science*, Vol. LIII, pp. 476, 477.

by Specht, however, two patients when tested with arithmetical work did not show especial liability to fatigue. But a "psychogenic impediment" was very evident, and their capacity for work had been almost destroyed.[1]

Gross[2] and Finzi found great liability to fatigue in their patient, Mr. P., who had suffered in a railroad accident, though not seriously, when about a year later they made tests of his power to add. Psycho-motor fatigue especially appeared much sooner than intellectual fatigue. Finzi also found with the same subject poor comprehension, poor ability to direct attention, great distraction, and slight capacity to improve by practice.

3. *Traumatic Hysteria.* Charcot was the first to establish the possibility of hysteria occasioned by injury. He formulated the theory that its development is the result of suggestion. The shock acts as the hypnotizing agent and local pain calls the patient's attention to the part injured. Bailey[3] believes that there are some objections to this theory but that it is the best that has yet been proposed. The disorder is comparatively rare among Americans. It is more common in Europe and particularly in France. The Hebrews all the world over are said to be liable to it. Charcot thinks the predisposing causes are found in persons of diseased, degenerated or abused nervous systems. The predispositions may be inherited or acquired. Without such predisposing causes the disease could not exist. The Germans, however, do not attach so much importance to the predisposing causes. It is difficult to find evidence of inherited impairment of the nervous system and hysteria may develop in persons whose lives seem to have been free from injurious influences. Traumatic hysteria has been recognized only in recent years, but it is now estimated that one-fifth of the cases of hysteria are of traumatic origin.

The circumstances under which the accident occurs are far more significant than the severity of the injury. Fright and excitement aid very materially in developing the symptoms. The influence of suggestion is evident. Experiences which are accompanied by painful feelings, frights, anxieties, shame and psychical pain, are fruitful in the production of hysterical symptoms. The results depend upon the sensibility of the person in question.

Freud[4] affirms that all cases of hysteria can be traced to a

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[1] Specht: *Journal of Mental Science*, Vol. LIII, 1907, p. 506.
[2] Gross: *Psychologische Arbeiten* (Kraeplin), Vol. II, 1899, pp. 569-586.
[3] Bailey: Accident and Injury. Appleton, N. Y., 1900. p. 272.
[4] Jung: Diagnostische Assoziationsstudien. Leipzig, 1906. pp. 258-281.

series of psychic shocks which culminate finally into a sexual trauma of the pre-pubertal period. He believes that the hysterical symptom is essentially a symbol for ideas, which, in the last analysis, are sexual and which are not present in consciousness because thrust from it by a strong inhibition. This suppression is due to the ideas being so strongly colored with displeasure as to be imcompatible with consciousness.

Bleuler[1] declares that there is no definite line of demarkation between the conscious and the unconscious. Our psychic processes are just as much influenced by those that are unconscious as by those that are conscious. In this sense there are unconscious sensations, perceptions, inferences, feelings, fears, and hopes which are distinguished from the so-called conscious phenomena only by the absence of the consciousness-quality. The separation of the two processes is entirely arbitrary and cannot be justified by observation. It is impossible to explain consciousness without admitting the unconscious phenomena, for the unconscious mechanism conditions, at every moment, the conscious processes.

The part injured is the most likely to be the seat of the trouble. When psychic shock alone is the exciting cause, the symptoms are usually less exactly localized, patients tending more to aphonia, convulsions or coma. It appears that age, sex, occupation and race influence trumatic hysteria. Knapp found the cases distributed about equally between males and females, but he has failed to convince all that this is true. The cases are most frequent in the active period of life. Modes of life which impair the health exert an influence on the genesis of traumatic hysteria, but the continued stress of litigation, which is at times a contributary cause of traumatic neurasthenia, does not have the same influence in producing hysteria. So far as hysteria is concerned, when the first fright or injury has been received the mischief is already done.

Nothing is known concerning the anatomical changes which are responsible for hysteria of any sort.

4. *Insanity Following Shock.* States of extreme mental depression or excitation have been observed to follow violent neural or psychic experiences and seem not rarely to pass without break into the gravest mental disease, though it may be doubted that shock alone often leads to such a result without the presence of other predisposing causes. Many cases could be cited in confirmation of the above statement; only a few typical instances, however, will be mentioned in this connection.

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[1] Jung: Diagnostiche Assoziationsstudien. Leipzig, 1906. pp. 229-257.

A college student was thrown into an extreme state of fear by hazing. This fear passed into an attack of melancholia.[1] Sudden and great frights sometimes merge directly into acute dementia or stupor. A young man was returning home late at night when he was frightened by a practical joke. On the next day, he was found in the condition of acute dementia from which he suffered for several months.[2] A young woman was insulted by a peasant and the shock terminated in catalepsy.[3] In another case the burning of the home set up acute mania which ended fatally in a week.[4]

In some instances there appears to be a sudden throwing off of the control of the higher centres while the lower centres become excessively active. A condition of uncontrollable motor excitement is developed along with the lowering of the mental level. The following cases will serve to make this point clear.

A frontier guard on returning to his cabin found his wife and children dead. They had been scalped and mutilated by the Indians. He at once began to laugh and exclaimed to himself repeatedly: "This is the most foolish adventure I have ever seen." He laughed convulsively without cessation until death ensued from a vascular rupture.[5]

A peasant boy twelve years old was frightened, while crossing a field, by the owner of the field running after him, throwing him down and beating him brutally with his fist. The child trembled with fear at the time, and subsequently suffered what appeared to be a complete change of character and temper. From being agreeable and obedient, he became unkind, irrascible and dissipated. He was incapable of the slightest effort of attention and was often obscene in thought. At the same time, he was seized with attacks of foolish laughing. These grew more and more intense and came without any apparent cause. When asked about his motive for laughing, he replied that it seemed to him as if some one were behind him crying in a loud and menacing voice and striking him on the back. In spite of the terror which he suffered, he was not able to inhibit his laughter. These attacks lasted for fifteen or twenty seconds and were repeated many times in the course of a day and night.[6]

Persecutory paranoia may develop from an accident. A woman, forty-three years old, on November 7, 1894, was se-

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[1] Kellogg: *New York Medical Journal*, Vol. 82, 1905, pp. 797-800.
[2] Savage: Insanity and Allied Neuroses. London, 1884. p. 55.
[3] Tuke: Dictionary of Psychological Medicine. London, 1892. Vol. I, p. 185.
[4] Savage: Insanity and Allied Neuroses. London, 1884. p. 55.
[5] Toulzac: Rire et Pleurer Spasmodiques. Paris, 1901. p. 19.
[6] Toulzac: Rire et Pleurer Spasmodique. Paris, 1901. p. 20.

verely wounded on the right hand. Gradually trophic disturbances appeared. The skin became glassy, the musculature of the right hand atrophied, and there was a psycho-motor paralysis of the arm. The entire right half of the body showed hyperæsthesia. The field of vision was contracted on both sides. There were pains in the head, forgetfulness, nausea and poor sleep. A hysterical condition developed later which rapidly passed into hallucinatory paranoia with persecutory ideas.[1]

In illustration of the frequency of grave mental disorders resulting from a shock of some sort, we may cite the figures for the single year 1906-1907 given in the recent Report of the State Commission in Lunacy of New York.[2] This report gives a total of 6,954 cases admitted to the hospitals of the State during the year ending September 30, 1907. Of this number 231 cases were recorded as due to adverse conditions such as the loss of friends, business, etc.; 33 to religious excitement; 82 to fright and nervous shock; and 109 to accident and injury. Of these 455 cases, 88 had inherited predisposing cause for insanity, leaving 334 cases attributed to some sort of shock alone.

### 5. Milder Psychic Disturbances

a. *Defective Memory.* Memory may be disturbed in a greater or less degree by shocks of either sort; but it is necessary to exclude here many cases of head injury, in which shock may very likely play a rôle, because the effects are then complicated by possible effects of direct injury to the brain substance. The following instances will serve to illustrate some of the ways in which the memory is disturbed.

Mr. A. found the front door of his home locked one dark night and on attempting to go to the rear door, fell into the basement and was found unconscious about one-half hour later. In a few hours he was restored to consciousness and the next morning fully understood the passing events. He retained, however, no memory whatever of his fall. All recollection ceased at the moment he turned from the front door.[3]

Dr. Douglas Graham, of Boston, tells of the following experience: "One evening in October, 1900, at 9.15, I found myself in bed with my head sown up. I asked my wife how I came to be there and what had happened. She said I had been knocked down by a 'scorcher,' and brought home in an ambulance with two policemen three hours before. . . . I have a dim recollection of getting off the car about ten minutes before I was knocked down by the bicycle. Then there was an

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[1] Bruns: Die Traumatischen Neurosen. Wien, 1901. p. 34.

[2] State of New York State Commission in Lunacy, 19th Annual Report, Oct. 1, 1906, to Sept. 30, 1907. p. 364.

[3] Cowling: *Louisville Medical News*, January, 1880.

absolute blank for about three hours. I asked my wife how I seemed when the policemen brought me into the house. She says that I walked from the ambulance with a policeman on each side of me steadying me—and I was very profuse in my thanks for their assistance, declaring all the time there was nothing the matter with me."[1]

Mr. Ravenhill, the *Punch* artist, gives the following account of his experience: One morning, while at Delhi, he was riding about town and making sketches. Suddenly the saddle-girths broke and he was thrown to the ground. For a time he was unconscious. When he came to himself his memory was completely gone. He could not recall his own name or the name of any friend. He could neither tell where he came from nor where he wished to be carried. Finally he was given his pencil and sketch book and was directed to draw a plan of Delhi and to mark the place he wished to go. Being unfamiliar with the city, he could not make the plan. He had, however, a misty picture of a long row of white canvas tents. When the pencil was put in his hand, he automatically began to sketch what was in his mind. After making a rough sketch of the camp, the desire to get back to his friends came with so much force that he was able to indicate accurately the place to which he wished to be conveyed.[2]

A man was thrown from the train and picked up unconscious. When he recovered, he had no recollection of how he had been hurt. The last thing he could remember was getting on the train about two hours before the accident. About eighteen months later he was on a train and, while passing from one car to the other, was nearly thrown from the platform by a sudden lurch. In his efforts to save himself, he recalled the incidents of the previous accident and the way he happened to be thrown from the train. The events of the first experience had been registered in the cortical centres, but could not be brought into consciousness. They were held in the neural memory and the second shock was sufficient to raise them into conscious life after a lapse of eighteen months.[3]

The following case, reported to the writer by a trustworthy witness, illustrates how a purely psychic shock may cause a disturbance of the memory. Mr. F., with others, was enjoying a social evening when a telegram was handed him. He was so much disturbed that it was impossible for him to open the envelope. Later it was discovered that he had no memory of several events which preceded by a minute or more the ringing of the door-bell announcing the messenger boy.

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[1] Drummond: *Paidologist*, Vol. IX, 1907; 44.
[2] Drummond: *Paidologist*, Vol. IX, 1907; 43-44.
[3] Burr: *American Journal of Insanity*, Vol. 63, p. 378.

b. *Shock as a basis of Fear.* Shock is a fertile mother of fear, and the fears resulting may at times be both permanent and intense. In many instances no rational account can be given for their existence. They, however, persist and disturb the conscious life, behaving as a split-off portion of consciousness. Breuer and Freud[1] maintain that some of the shock experiences pass away and leave no bad effects, but others persist or return after a long, latent period. This latter condition is one of the strange things in mental life. The authors hold that through shock an experience is separated from the mass of the psychic store and thus an erratic idea is formed. For some reason or other the experiences fail to fuse with the mass already in consciousness. This new experience then forms a new nucleus for a dissociated system of ideas. This dissociated system often manifests itself in a persistent fear or insistent idea. A few concrete cases may be cited.

A cultured woman, thirty-seven years of age, became nervous and sleepless, and thought herself incurable. She blushed easily and had various nervous movements of the shoulders and hips. She was unable to remember many things about her previous life. She had two insistent ideas: she believed that she had been the cause of the death and going to hell, of one of her neighbors, and she, also, believed that she had caused the death of a boy pupil because she had given him a mild flogging. By the method of word-associations, as used by Jung, it was discovered that when the patient was seven years old, she had overheard the circumstances connected with the origin of a younger child. This acted as a psychic shock, and as such an idea was entirely foreign to the culture and refinement of the patient, it had to continue in a submerged condition apart from her normal consciousness. There was, thus, developed a system of ideas that did not fuse with the main stream of consciousness and the two systems tended to inhibit each other emotionally. As a result there was a constant discontent and a reproachful coloration in her normal consciousness. Jung explains her cure as the result of the strong effort required to drag the submerged facts up into full consciousness and to express them in the presence of others. Freud would say that she was cured not by the "energy cure" but by the confession itself. In either case, the cure was the result of bridging the chasm between the submerged system of ideas and those in normal consciousness, a chasm ultimately due to an experience of shock.[2]

When Charles Lamb was a child he was shown the picture

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[1]Breuer und Freud: Studien über Hysterie. Leipzig, 1885. p. 9.
[2]Jung: Diagnostische Assoziationsstudien. Leipzig, 1906. p. 258.

of the Witch of Endor raising up Samuel. The scene was too intense for his childish nerves. "I was dreadfully alive to nervous terrors. The night-time solitude and the dark were my hell. . . . . I never laid my head on my pillow, I suppose, from the fourth to the seventh or eighth year of my life—so far as memory serves in things so long ago—without an assurance, which realized its own prophecy, of seeing some frightful spectre."[1]

Leigh Hunt, in his autobiography, tells of the influence horrible pictures had had on his life. He was shown a picture of the fabulous wild beast "Mantichora," half man and half tiger, represented as devouring small boys. He adds: "Such things are no petty ones to a sensitive child. My brothers had no notion of the mischief they did me. These scenes helped to morbidize all that was weak in my temperament and cost me many a bitter night."

Mr. A. was seen to give at all times, a wide berth to any horned animal. The approach of such animals seemed to demoralize him as much as a charge of cavalry. He confessed that, when a child, a cow had chased him, thrown him down and then tossed him on her horns. He has never completely recovered from this shock or been able to banish from his mind the sense of terror the circumstance produced.[2]

Here is another case taken from the life of George Brandes. He was asleep in the nursery and was awakened by his uncle saying loudly, "We must take the children out of bed." This was at night and when he opened his eyes, he was filled with terror. The room was bright, for a nearby schoolhouse was on fire. The flames crackled and sparks flew and it seemed to the boy that the world was on fire. His uncle asked him if he had palpitation of the heart. The child had never heard of this before, but his heart was beating furiously. The child was told that it was November 25. "The fright I had was so great that I never forgot this date, which became for me the object of a superstitious dread and when it drew near the following year, I was convinced that it would bring me fresh misfortune. This was so far the case that next year, at exactly the same time I fell ill and was obliged to spend some months in bed."[3]

A professor of psychology was fearless of high places through his youth, but soon after leaving college, he saw a servant fall from a fourth story window. He assisted in caring for the patient and since that time he cannot sleep in rooms high above

[1]Works of Charles Lamb. Harper Bros., N. Y., 1872. Vol. II, p. 82.
[2]Porter: The Philosophy of Courage. *Century*, Vol. 14, 1888, p. 246.
[3]Brandes, George: Reminiscence of My Childhood and Youth. N. Y., 1906. p. 4-5.

the ground. He has tried in vain to ascend Bunker Hill monument as a discipline, but found the tension too great. He was able to get over the suspension bridge at Niagara eighteen years later, only by walking in the middle of the bridge and grasping a carriage. The fear is rather more that the whole structure may collapse, but partly that he will lose control of himself.[1]

Sidis, in his studies in psychopathology gives a number of cases illustrating the existence of a fear which he has traced to some psychic shock experienced earlier in life. A single case may be taken as typical of a number that the author describes in detail.

Mr. D., who is twenty-five years old, has an "abject terror of dead people." In his childhood he was told many stories about ghosts and the wandering souls of the lost. When he was about nine years old his mother noticed some abnormal growths on his body. Fearing that these growths might become serious, she followed the advice of a friend and made use of a charm. The little boy was taken into the room where the dead body of an old woman was lying and the cold hand of the corpse was placed on the naked breast of the child. The child was terrified and fainted. From this experience dates his fear of the dead, the idea becoming subconsciously fixed.[2]

c. *Changes in Character.* Persons, who experience a shock of either sort, frequently undergo a change in character. Some instances have already been noted in other connections. Let us now turn to a few cases that show this factor in particular.

Mrs. A. had a family history of neurotic taint, but she lived in comfortable circumstances, was of more than average intelligence and had received the education of her class. When she was eighteen years of age, she suffered a severe shock in the sudden death of her father. This changed her condition permanently. She ceased to menstruate and suffered from other troubles peculiar to women. Her attention became weak and there developed a feeling of doubt as to her rightful possessions. She came to fear that she would cause the death or illness of the children she met. Water in quantity suggested the death of some one by drowning, and she came to feel that she was responsible for such imagined deaths. Later she imagined that the bread and meat she ate were human flesh. She feared to knit lest the needles should get into the food and be swallowed by some one. Yet, at the time, she was

[1] Hall: *Am. Jour. Psy.*, Vol. VIII, 1896-1897, p. 155.
[2] Sidis: Studies in Psychopathology. Boston, 1907. p. 45.

conscious that these were only "queer and silly notions." She has retained a sympathetic attitude toward her friends, and has remained truthful, good natured, pleasing and sociable.[1]

A girl heard of the sudden death of a friend she had chatted with that morning. "The awful shock nearly killed me, and changed me in a moment from a careless girl into a woman."[2]

A boy of seven was struck on the head by a cobblestone two years ago. No fracture of the skull was found, but there was a severe scalp wound which bled profusely. He was not unconscious at the time. Since the injury there have been frequent outbursts of irritability without amnesia. There is no intellectual defect, but in school he is very mischievous, plays truant, and draws peculiar pictures. There is no evidence of epilepsy and no degenerative stigmata.[3]

Mr. A. was slightly hurt in the muscles of the back in a collision of two trolley cars. Several were hurt and the circumstances were horrifying. The patient was stupid for the next eighteen months. If he were sent on an errand, he would forget what he was sent for. He would get lost in the street and give irrelevant answers to questions. He became lazy and had no interest in his family. His attitude toward them was entirely changed ; he simply sat about, ate, slept. He had no hallucinations or delusions. Few facts could be obtained about his life, but he had been industrious and a good workman and had cared for his family. He had been a steady, but not an excessive drinker, for years.[4]

Mr. B. D. graduated from high school with honor and went into the office of a financial corporation. He was successful, but sensitive, anemic, and worked beyond his strength. He was neurotic and his family history was bad. In a railway collision, a car rolled down the bank and several were killed. The patient, however, received no physical injury. He tried to work the next day but he was too nervous to do so. Dr. Burr saw him several weeks later. He was then listless, sluggish in thought, careless about his personal appearances, dull and stupid. His hands were bluish-red, moist and cold ; his pupils were dilated ; his pulse was rapid ; and his gait was slouching ;

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[1]Nolan : *Journal of Mental Science*, Vol. LIII, p. 615.

[2]Hall : Study of Fears. *Am. Jour. Psy.*, Vol. VIII, p. 194.

To these may be added the following which have been reported to the writer by reliable witnesses. A young man shot a friend by accident. Before the accident he had been very fond of society. After the accident, he appeared to avoid people and was timid and shy. When J. was five years old, she saw a pig killed by her neighbors. She became depressed over the matter and would never again eat meat.

[3]Coriat : *Psychological Clinic*, Vol. I, p. 136.

[4]Burr : *Journal American Medical Association*, Vol. 48, p. 36.

his attitude stooping. One shoulder was higher than the other. It was feared that adolescent dementia would develop. He was sent to the country for a year, and on his return he resumed work apparently well.[1]

6. *Curative Effects of Shock.* In view of what is now known as to the efficiency of various forms of psycho-therapeutic treatment, it would be remarkable if shock had not some cures to its credit. Many of the recorded instances belong, however, to the older literature of the subject or are the unconfirmed reports of casual observers. One may perhaps accept the account of the "cure" in such cases with due reservations as to the true diagnosis of the trouble.

Mosso cites Michia[2] as often having written insulting anonymous letters to patients suffering from mental derangement in order to cure them. This, Michia affirmed, gave good results in some hypochondriacal cases. He sought to remove fixed ideas by bringing before the mind of his patient some danger. Hysterics have been treated by threats or a sudden fright when all other means proved useless.

Amann, also cited by Mosso, tells of an hysterical patient who was subject to tetanic convulsions and trances who was cured by a beating at the hands of her father. In this same connection Mosso tells how Boerhave, while physician at Haarlem, suppressed an "epileptic" epidemic by means of fright or mental shock. When the physician saw that "epilepsy" was daily increasing, he had prepared a brazier full of coals in which he heated a number of pincers red-hot and announced to his patients that all who had fits thereafter were to be branded.

The ancients believed that maladies produced by strong emotion could be cured by other emotions equally strong. Others recommended flagellation for certain forms of melancholia and mania.[3]

Porcher found two instances in which he attributed cures to the psychic shock accompanying the Charleston earthquake in 1886. One gentleman was cured of his rheumatism, and another, who had been, for months, nervous, depressed and entirely unable to attend to any business, regained energy and former activity.[4]

A mild psychic epidemic in a girls' school was thus arrested by Dr. R. When called to the school the doctor found ten girls on the floor in what seemed to be a deep sleep. Their faces were pale; their breathing deep and quiet; their muscles

[1] Burr: *Journal American Medical Association*, Vol. 48, p. 36.
[2] Mosso: Fear. London, 1896. Tr. ch. 15.
[3] Meibomius: Utilite de la Flagellation, 1879, pp. 37-40.
[4] Porcher: *Medical News*, Vol. 49, p. 651-653.

flabby; their eyes closed; their pulses weak but normal in frequency. Their upper eyelids had a trembling movement such as is frequently seen in hypnotic cases. On opening their lids their eyes turned up and in this position the pupils reacted to light. They did not respond to commands or to shaking. Two showed stiffness in the neck and back. All were apparently unconscious. The doctor prescribed a pint of water dashed in the face of each girl coupled with the command to stand up and to stop such nonsense. This treatment was immediately successful. Half astonished and half ashamed all the girls arose at once except the two that had showed stiffness in the neck with whom a repetition of the treatment was necessary.[1]

Sthenic emotions are reported to have cured the gout. Féré[2] tells of a man confined to his bed by a violent attack, who, when one of his little daughters came into the room and was in danger of injury from a loose board left by a workman, threw himself in front of her and to his astonishment no longer felt the pain in his foot. On another occasion the same man was suffering from a still more serious attack when he ordered his servant to bring a table into his room. The table would not pass through the door except when turned in a certain position. After giving instructions to the servant in vain, he became exceedingly angry and drew it into the room himself. The pains instantly disappeared. Other cases of this same sort could be cited.

Fear of shipwreck has arrested seasickness and the same is true of other strong emotions. Thomas Moore was suffering from seasickness while crossing the Irish Sea when he was told of the death of his father. The seasickness soon ceased. The effect of fear on the organs of secretion is frequently reported. Chorea, which frequently develops after sthenic emotions, especially after fear, can be cured by a shock of the same sort. Hughes[3] tells of a girl suffering from an attack of chorea, that was cured by a fright received while crossing London Bridge. At the Congress of Alienist Physicians in 1888, Talcott[4] reported many cases of madness that had been cured by trauma.

The shock treatment is not a panacea, however. Somatic and psychic shock may have a tonic effect, but they may also have a depressive one. Which will result in any case depends, in

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[1] Zeitschrift für Schulgesundheitspflege, 1893, p. 561-563.
[2] Féré: Pathology of Emotions. London, 1899. Tr. pp. 274-275.
[3] Féré: Pathology of the Emotions. London, 1899. Tr. p. 277.
[4] Talcott: *Annales Medico-Psychologiques*. Paris, 1889. Tome, 9. pp. 307-309.

large measure, on the state of the body and mind of the patient at the moment of receiving the shock.

VI. Pedagogical and Reformative Influence of Shock

a. *Animal Behavior Modified by a Single Experience.* There are a few well authenticated cases which show that animals may sometimes learn from single experiences of an intense character. They may well serve as an introduction to our section on the pedagogical and reformative influence of shock. A single punishment administered when a horse is frightened is often sufficient to produce lasting fear of the object in question. Porter[1] tells of a pig that was in the habit of gathering up the stray grains of corn at a railway station. While doing so one day its tail was caught between a car wheel and the brake shoe and torn off. The pig continued to come for corn but after the accident the noise of an approaching train caused him to beat a hasty retreat.

Monkeys also have been known to profit from a single painful or disagreeable experience. The act once performed leaves a lasting impression. After cutting themselves with a sharp knife, they do not touch it again; or, if they do, handle it with the greatest caution. On a certain occasion a monkey was given a lump of sugar wrapped in a paper. After a time a wasp was put in the package and the monkey was stung. A single experience established the habit of holding the package to the ear to make sure that there was no movement within.[2] Garner's chimpanzee, Moses, was burned by mischievously thrusting his hand into a can of hot water. After this experience Moses habitually avoided anything which gave off smoke or steam. Morgan's chicks learned from one or two experiences to avoid pecking at distasteful substances. A raccoon in Davis's experiments after opening a fastened box twenty-four times by a single method of attack caught one of her toes between the door and a hook. From this single experience dated a permanent change in the method of opening the door.[3]

b. *Influence of Shock in Punishment.* The shock of physical pain has been from time immemorial the last resort, and often the first, of the mental and moral trainer of the human animal. Hall[4] believes that a child whose will is not absolutely diseased by balkiness, may be helped by a whipping, if properly administered. It aids the power of self-control. In case of

[1] Porter: Philosophy of Courage, *Century*, Vol. XIV, p. 246.
[2] Darwin: *Descent of Man*. Appleton, 1903. p. 76.
[3] Davis: *Am. Jour. Psy.*, Vol. 18, p. 467.
[4] Hall: Study of Anger, *Am. Jour. Psy.*, Vol. X, p. 578.

young children a sudden blow on the instant and without a word of warning or moralizing is often very effective. The teacher or parent may show indignation to good advantage. "This gives a quick sense of the natural abhorrence with which such conduct is regarded and teaches the child limitations beyond which its conduct becomes outrageous to others." In the case of children tenderly brought up neglect alone is often sufficient to surprise or shock the child into realizing the parents' disapproval of his conduct. Anger may, however, be overcome by a wholly different sort of a shock, to wit, by provoking a laugh. The change in mental attitude allows other emotions to assert themselves and the child's self-control is regained.

Smith[1] in discussing obstinacy concludes that where such a state of mind is accompanied by a long and violent outburst of anger leading to a state of exhaustion, corporal punishment may be the best means of treatment. A spanking or a shock of some sort seems to have, not only a good immediate effect, but proves a relief also to the child. The author adds that in such cases there is often a high degree of nervous tension and a condition approaching hysteria. Physical pain or shock seems to relieve this tension and drains off the nervous energy into channels that are desirable for mental hygiene.

In the following, related by competent authority to the present writer, a psychic shock served as an efficient means of discipline. A young colored boy was found to be very difficult to manage. In fact, all means known in the usual list of punishments had failed. As a last resort an appeal was made to his superstitions. He was placed in the cold-air passage, and a strange noise was made so that the boy could hear it but could not see its source. He was very much frightened and from this time on he has been reasonably docile. It is only necessary to mention sending him to the small room and he yields.

c. *Shock as an Element in Conversion.* In an earlier section reference has already been made to the profound changes in character resulting from physical and psychic shocks. Certain typical cases of sudden conversion resemble these closely in causation. Some religious sects seek to make use of this method and to increase their membership by emphasizing the fact of sin and setting it against salvation. They insist on a definite, decisive, and more or less momentary change of life. Such denominations advocate passivity not activity; relaxation and not intentness. The individual is urged to become indifferent and to resign himself to the care of higher powers. This

[1] Smith: Obstinacy and Obedience, *Pedagogical Seminary*, Vol. XII, pp. 27-54.

state is reached by passing a critical point. A corner must be turned. Something must give way. A native hardness must break down and disappear. This event is frequently sudden and automatic and leaves on the subject an impression that he has been wrought upon by an external power. Many people testify to this sort of an experience. The break in continuity is so sudden that it may easily be classed as an experience of shock. James offers the following explanation based on the assumption of a subliminal consciousness. The vestiges of mental contents gather with such power that they burst through barriers which separate the conscious from the subconscious, and overflow the field of the conscious life. The mind forges forward with a leap.[1]

Prince believes that, in some cases of sudden conversions, there is formed a new system of ideas not as the result of an "uprush" from a co-active subconsciousness, but rather by the "automatic crystallization of past experience out of what may be termed the potential or latent consciousness." These memories of past experiences until this moment were not systematized; but now they become a sort of emotional automatism, an independent focus of energy and persistently dominate consciousness. He affirms that most cases of sudden conversion are of this type.[2]

d. *Shock as a Factor in Ethnic Degeneration and Mob Consciousness.* History has many illustrations of the destructive power of mental shock on the ethnic mind. Some sudden, great and unexpected catastrophe as a malignant epidemic or disastrons war breaks asunder the associations or overturns the institutions under which the community has grown up and reconstruction is slow or perhaps incomplete or impossible. In the Black Death, 1348-50, nearly one-fourth of the people were destroyed. Following the terror and despair of that time, there was an unparalleled abandonment of all restraint. Reckless indulgences in the wildest debaucheries are reported. There was an entire disregard of social restrictions.[3] Medical historians[4] tell us that following the "Plague and Famine"

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[1] James: Varieties of Religious Experience. London, 1902. p. 113.

[2] Prince: *Journal of Abnormal Psychology*, Vol. I, pp. 42-54. In this connection compare also the statement made by Näcke in the *Zeitschrift für Religiouspsychologie*, Band I, Heft 6, S. 233-253. A sudden emotional experience not only fills consciousness, but also sets into action many forgotten experiences dating back to childhood. These reawakened experiences have their original emotional tone. The previous existing ideas are submerged and we have a complete shifting of the point of view of the individual.

[3] Brinton: Basis of Social Relations. New York, 1902. p. 102.

[4] Hecker: Epidemics of the Middle Ages. London, 1846. pp. 32-50.

years 1491-95 "the corruption of morals reached a height without parallel in ancient times."

Defeat in battle has depressing power and conquered peoples often have their spirits broken. The Aztecs, who had been a proud and warlike people, sank to the condition of serfs when conquered by a handful of whites.

Great natural convulsions like earthquakes leave a deep impression on the minds of men who experience them. Humboldt,[1] who refers to the matter, does not think the impression a result of the fearful pictures of devastation, but that it is rather due to the sudden revelation of the delusive nature of the inherent faith by which men had clung to a belief in the immobility of the solid parts of the earth. "We are accustomed from early childhood to draw a contrast between the mobility of water and immobility of the soil on which we tread; and this feeling is confirmed by the evidence of our senses. When, therefore, we suddenly feel the ground move beneath us, a mysterious and natural force with which we were previously unacquainted is revealed to us as an active disturbance of stability. A moment destroys the illusions of a whole life; our deceptive faith in the repose of nature vanishes, and we feel transported, as it were, into a realm of unknown, destructive forces. Every sound, the faintest motion in the air, arrests our attention, and we no longer trust the ground on which we stand." Men see in the earthquake an universal and unescapable danger. Though the excited state of mind does not itself endure long, its effects strike deep roots into the conscious life.

The mob mind often comes into evidence as the result of an emotional shock. The cry of fire or the sight of flames throws an audience into panic. Again, when the community feels that it has been outraged by some heinous crime, mob violence is the result. In both cases the usual restraints of civilization are broken down and the primitive and anti-social emotions come to the front.

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# THE FIELD OF EDUCATION

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The professional training of teachers is still young. This is especially true for secondary and for higher schools. As a consequence the content of the curriculum in teachers colleges and in schools of education is unsettled and chaotic. To have this impressed upon one's mind, one needs only to inspect the catalogues of a half dozen different universities having teachers courses. Lack of a common technical nomenclature makes the apparent chaos greater than the actual. The term 'Principles of Education' for example, means one thing in one place and quite a different thing in another place. The boundaries between the different subjects are seldom drawn twice at the same points. As a result, a student having taken a subject in one school may be obliged to cover much of the same ground again when taking a different subject in another school.

The problem of the content of the pedagogical field may perhaps be best approached by asking of what the professional training of the teacher should consist. What subjects are essential for the teacher in training to pursue? This question may be asked here just as it may be asked for the prospective physician, lawyer, or engineer. In each case the answer consists of a list of subjects covering the various aspects of the student's later professional activities.

The diversity of subjects mentioned in the catalogues of training schools for teachers may, it would seem, be reduced to following list.

Adequate Academic Preparation
General Psychology
Child Psychology
Principles of Education
Principles of Teaching
History of Education
School Management and School Law
School Hygiene
School Administration
School Supervision
Special Method
Observation of Teaching
Practice Teaching

The academic preparation of the teacher must be regarded as at least semi-professional, for it comprises the stock in trade that the teacher uses in plying his calling. It will needs vary with the grade of school and the subjects which the student intends to teach. No definite standards have yet been evolved in this country, but they are becoming manifest in several directions. It is quite generally the custom now for the grade teacher in the city system, and even in the progressive country district, to have at least a normal school diploma. This has in many places been made obligatory by school boards, who act in response to social and professional demands. The normal school course stands for approximately two years of preparation beyond the four year high school. These two years include the time for the more strictly professional subjects, to which about half the time is given. For country school teachers a lesser amount of preparation is being provided in some places, notably in Wisconsin. This is done by means of county training schools, which admit from the eighth grade and grant a diploma after the completion of a two year course. Similar courses are also provided in some of the normal schools in various parts of the country.

For high school teachers, preparation equivalent to the standard bachelor's degree is being more and more demanded. Rules making this demand obligatory are now on the minutes of many city school boards. This is the minimum. For the high schools in the larger cities, applicants holding the master's and even the doctor's degree are preferred.

Technical professional training for high school teachers is still in its infancy, but this, too, is rapidly coming. A number of the states already demand by statute that a certain minimum amount of time shall have been devoted to professional subjects by the prospective teacher before he is allowed to teach on his diploma without examination. Teachers colleges, and schools and departments of education have recently been, and are still being organized in connection with most of the larger universities of the country. These have for their avowed aim the training of high school teachers. Degrees in education and professional diplomas are granted on the completion of the course including the professional work. Even the professional training of college teachers is beginning to be discussed.[1]

At present the professional work in colleges is counted toward the bachelor's degree and no more units are required of the student for the professional diploma and the degree than have been demanded heretofore for the degree alone. This is well if it proves to leave enough time for the academic work,

[1]See the *School Review* for March, 1908.

but if it does not, a year should be added in the teacher's course, making that course five years beyond the high school instead of four. If the bachelor's degree is then conferred at the completion of four years of work, the master's degree might be conferred in conjunction with the professional diploma at the completion of the next year. Altogether this would no doubt be a better arrangement for the adequate professional training of high school teachers.

While the academic work should include something of all the principal branches of knowledge, in the teacher's course, as in the other courses, the major part of it should be, and usually is, grouped about a few related topics so as to insure adequate preparation in the branches the student wishes to teach. The subjects cannot well be left freely elective, but the restriction would be such as any wise student would make for himself.

There are a number of subjects that bear an especially close relation to the professional work of the teacher, being in fact preparatory for it. Among these subjects should be mentioned biology, sociology, philosophy, logic and ethics.

Education is largely a biological and sociological function and, therefore, it is highly desirable that the teacher should include in his academic preparation introductory courses in biology and sociology. Without these he must necessarily be more or less handicapped. Sociology lays the foundation for the appreciation of the meaning, aim and value of education, and biology lays the basis for psychology, makes explicit the fundamental principles of development and introduces the student to the evolutionary point of view, without which one cannot have a sympathetic appreciation of modern culture. Some neurology is needed as a basis for psychology, but as the psychological texts usually cover the needed parts of this subject, a separate course is not strictly required.

History of philosophy, logic and ethics is also desirable as an element in the teacher's training. The history of philosophy gives a conspectus of the development of man's conception of the meaning and value of reality, life and mind, and so forms an almost indispensable correlate of the history of education; logic, inductive and deductive, is necessary for the thorough understanding of the typical methods of instruction; while ethics correlates with the Principles of Education and is needed every day in the schoolroom. An introduction to modern philosophy, for its synthesizing value, is scarcely less desirable.

The connecting link between the academic and professional subjects in the teacher's course is formed by psychology. On which side this subject should be classed is disputed in theory and is unsettled in practice. It is generally agreed, however,

that the subject is essential and basic in the teacher's training. Psychology gives a knowledge of the known facts and principles of the mind, and as it is the teacher's immediate function to bring about mental changes, he must know psychology if he wishes to proceed intelligently. Mere empirical knowledge is as inadequate here as it is in agriculture or engineering. Just as the engineer profits by the facts and principles of mechanics, so the teacher profits by the facts and principles of psychology.

It is becoming customary in colleges to give three hours a week for half a year to the introductory course in psychology. This is enough time for the text-book work, but allows no time for experimental work in the laboratory, to which the prospective teacher should also be introduced.

Child psychology has not yet won for itself so definite a place in the teacher's professional curriculum as have most of the other subjects mentioned. It is only just emerging from the pupa stage of 'child study' in which it did not always command the highest respect. The texts in the subjects are still too long drawn out. But there are certain facts known here with which every trained teacher should be acquainted. A separate course in the subject should be provided, but if not, the work should form a part of some other course, perhaps the course in Special Method. Here it forms an ideal part of the introduction, and the phases especially needed may be emphasized. By the high school teacher, for example, the adolescent period should be most fully studied. In the college course, however, the subject is worthy of an assignment by itself.

No place is here given to 'genetic psychology'. In the undergraduate curriculum no special place seems to be needed for it because its ground is sufficiently covered by Child Psychology and by the Principles of Teaching. In the graduate department it may well receive a separate assignment.

The next two subjects, the Principles of Education and the Principles of Teaching,[1] have so far usually been given together under such names as the Science of Education, Philosophy of Education, General Method, etc. There are here two distinct lines of thought, however, and it is well to keep them measurably distinct in practice. Together they may form a year's work of two or three periods a week, the time being equally divided between the two.

The distinction between, and the function of, these two subjects are lucidly discussed by E. L. Thorndike in the introduction to his *Principles of Teaching*. He says: "What

[1] 'Education' is here used in the generic, and 'Teaching' in the specific sense.

changes should be made in human nature by primary, grammar and high schools and why these and not other changes should be the aim of the schools, are questions usually answered under the heading of 'Principles of Education'. How most efficiently to make such changes as educational aims recommend is a question usually answered under the headings 'Principles of Teaching', 'Methods of Teaching', 'Theory and Practice of Teaching', or 'Educational Psychology'." (p. 2.) That is, the function of the former is to raise and answer the question of the *What* and *Why* of education, while that of the latter is the *How*. Together these two subjects form the backbone of the teacher's professional training on the theoretical side.

The Course in the Principles of Education gets its data mainly from biology, psychology, sociology and ethics. It discusses chiefly the meaning, aims and values of education, deducing therefrom the historical-social significance of the curriculum and the criteria for the evaluation and selection of subject matter. It is the broadest, most unifying subject in the teacher's curriculum and for that reason some prefer to call it 'philosophy of education'. These, however, usually like to inject metaphysical speculations which are out of place here, in the undergraduate course at least.

The teacher in the classroom is mainly concerned with the 'how' of teaching, and only indirectly with the 'what' and the 'why.' The subject matter of the curriculum is determined by those higher in authority and by social forces outside the school, and the teacher usually has little power to modify it. But this does not constitute a ground for his remaining ignorant of its underlying principles. A teacher cannot work intelligently in any part of the school system without appreciating in some definite degree the purpose and function of education as a whole. He is no mere wheel in a machine but an intelligent worker aiming to assist in the achievement of the purpose of the whole.

Methods of teaching, too, are in many instances dependent upon what one understands to be the aim of education. A teacher who conceives the aim of education to be acquaintance with environment is likely to teach physics, for example, quite differently from one who conceives the aim to be mental discipline. It is because of this relation that the Principles of Education should logically precede the Principles of Teaching.

The subject here designated Principles of Teaching, is the course that applies the principles of psychology to teaching and is more commonly called 'educational psychology'. If the subject were merely an application of psychology to teaching, the term might be satisfactory, but as we have just seen, the

Principles of Education also furnish some data, and logic furnishes others. What we literally have here are the principles of teaching, or of imparting instruction, and these principles spring from various sources, of which psychology is but one, although the main one.

The function of this course has already been sufficiently indicated. It is to assist the teacher in becoming an intelligent, resourceful, and progressive worker in the immediate task of imparting instruction and of developing character.

The History of Education gives a view of what education has been in the leading nations and epochs of the past, what aims and methods have been dominant and why, what have been the causes of success and of failure, and how the present problems, aims and practices of education have come into existence. Little that is presented is directly applicable in practice but its value, both to the individual teacher and to the profession, is great, nevertheless. It gives (1) a common historical background to the profession, thus adding conventional and cultural elements to the teacher's life and ministering to the social consciousness and professional spirit of the group; (2) leaders like Socrates, Pestalozzi and Horace Mann, serve as an inspiration to all that make their real acquaintance; and (3) educational values and practices are seen, not to be absolute and fixed, but relative to the social and political life of the times, although the underlying principles are ever the same. On the more practical side the subject (4) aids in selecting successful, and in discarding unsuccessful methods; and (5) it helps in understanding a variety of pending problems that cannot be adequately understood or managed without a knowledge of their historical origin and growth. Such problems are the doctrine of formal discipline, the relation of interest and effort, the teacher's attitude toward the child, and the place of the classical languages in the curriculum.

School Management, also designated 'Classroom Management' and 'School Economy', deals with the management of the classroom with a minimum of friction and loss of time. Quick, quiet and harmonious control is its aim. The beginning teacher can gain much here from the experiences and experiments of others as recorded in text-books, and without the knowledge so gained he is likely to commit many blunders that he might otherwise have avoided.

School Hygiene deals with the physical care and welfare of the pupils of the school, and through them reaches the home and society at large. It is closely related to School Management, which subject it may logically follow in the curriculum, although the two should not be identified. The two subjects together should be given at least two hours a week throughout one year.

As an element in the teacher's training, School Hygiene is still far from having achieved the recognition it deserves. This is no doubt owing largely to the fact that the courses given in it in the past have not been sufficiently intensive and scientific; they have not been given by people with adequate training. The teacher needs to know not only the psychology of nourishment and fatigue, how to adjust desks, how to heat and ventilate a schoolroom, but also how to test for defects in the senses and the nasal passages, and how to detect the beginning of certain contagious diseases. To this end it would be well to have the course given by one who has taken a degree in medicine; but if this cannot be had, by one who has at least had thorough training in general bacteriology, physiology and psychology.

In state training schools, School Law is frequently treated in connection with School Management. Schools that train for no particular state cannot well cover this subject, but in a measure it may there be combined with School Administration. This subject deals, or should deal, with a comparative study of the organization, administration and support of state, city, county, district and foreign school systems. As yet its boundaries are not sharply enough defined, and it overlaps the fields of Management and of Supervision. There is still altogether too much of this overlapping in educational subjects, which is owing to the unorganized nature of the field. This wastes no small amount of time for the student.

In its relation to teaching, Administration must be classed with the Principles of Education and the History of Education, rather than with the Principles of Teaching, Management and Hygiene. Its bearing on the problems of the schoolroom, and those of the teacher outside the schoolroom, is more or less indirect, but none the less vital.

If foreign school systems are omitted here and are left to the graduate department, or are alone included, two hours a week throughout the year given to this subject, together with Supervision, would probably be a fair allotment of time. Supervision may follow Administration as Hygiene may follow Management.

School Supervision is only just beginning to differentiate from the somewhat amorphous fields of Administration and Management. It is of most vital concern to superintendents and principals, but it is well for all teachers to be acquainted with its leading principles so that they may be more able to work in intelligent and sympathetic harmony with the efforts of their supervisors. But both Administration and Supervision might perhaps be left as electives in the undergraduate work. Normal schools as a rule do not give this work at all in sep-

arate courses. Treatises and text-books in these two subjects are still far too scarce.

The aim of the course in Special Method is to select the appropriate elements from the various courses pursued and focus them down to the problems that a particular group of students will meet. The contents of this course will needs vary with the grade and type of school in which the members of the class are preparing to teach. It would be different for the high school than for the grade or the kindergarten teacher.

Review of subject matter is not Special Method, and when necessary, should be elsewhere provided. In preparing for high school teaching, for example, this course should at least consider (1) the meaning and function of secondary education, (2) foreign secondary education as compared with our own, (3) the relation of the high school to the college and to the grades, (4) the history in outline of secondary education in America, (5) recent tendencies in high schools and their causes, (6) adolescence and its relation to the high school, (7) the criteria for the evaluation and selection of subject matter, (8) the educational value, content and method of presentation of the different high school subjects, and (9) the organization of courses of study. For the grade teacher a corresponding list of topics should be selected, adapting them, perhaps, separately to the upper and the lower grades. There is material enough here to keep a class profitably busy two hours a week throughout a year.

This work should of course come late in the teacher's course, after most of the other theoretical subjects had been completed, for it rests upon them. Students, however, want to rush into this work first, thinking that learning to teach is learning some knack or device instead of the application of laboriously acquired principles. There is no short cut to intelligent teaching.

The person to give the course in Special Method is the educational expert, and not the specialist in subject matter, at least until the latter is pedagogically trained. As yet the teachers of science, language, etc., too seldom have the pedagogical outlook, and when they give the work the time of the class is too often wasted. To appreciate this fact, one needs only to examine the books on Special Method in the several so-called 'Teachers Series.' Some of these are entirely misleading, and scarcely half of them are worth casual reading, to say nothing of studying, yet these books are so planned that a class would fritter away two hours a week for a whole year in learning to teach one subject. This is certainly an instance of 'lay pedagogy' going to seed.

The capstone of the teacher's training is formed by the course in practice under guidance. This is as essential in the

right training of the teacher as is the hospital practice for the physician or the shop work for the engineer. Without it the student feels no vital need for the theoretical work, and so cannot properly assimilate and retain it. It might even be maintained that without it the student had better go out and get some practical experience before systematically taking up the professional work. Even a year of teaching goes far in laying the basis for the assimilation of theory. But beyond question the best method is to let the practice work run along side of the later theoretical work.

By having the first teaching done under intelligent and sympathetic guidance, much is gained for the teacher. He will be led (1) to form the connection between the theory and the practice, and (2) he will be started off with right teaching habits. In my experience as a supervisor of practice teachers I could almost invariably tell if a student had taught before or not, even though I had no previous knowledge of the fact. I could do this by the difficulty experienced in breaking habits, such as the repeating of the answers of the pupils. If the student had taught much, it was in many cases quite impossible to reform habits.

The connection between theory and practice is seldom formed effectively by the student himself. He may know all about the theory of the development, study, review and drill lessons, but without assistance he wastes much time in learning where and how to apply this theory, and often fails altogether.

The amount of time to be given to practice teaching is not easy to indicate. It should probably vary with the needs of the student. The time given by normal schools varies all the way from 10 to 60 weeks, and the responsibility of the student varies from being put in charge of the class for just one recitation period to having charge of the whole school for half a day and even a whole day. The tendency is to place more responsibility upon the student for a shorter time. The median time at present is approximately 20 weeks, or half a year.[1]

Facilities for offering practice work are at present one of the burning problems facing the teachers colleges and the schools and departments of education in our universities. How may this best be done?

The work in Observation is usually easy to provide, but the teaching observed should be of an expert variety. It may be given in conjunction with the Principles of Teaching, the

[1] See Ruediger: *Education*, Vol. xxvii, p. 174 f., Aspects of the professional work in normal schools; and *Educational Review*, Vol. xxxiii, p. 271 f., Recent tendencies in the normal schools of the United States.

course in Special Method, or it may form the introduction to the practice teaching.

It has been the aim here to present an outline only of the undergraduate work in the teachers course. In the graduate department a variety of other courses is naturally provided and considerable deviation is in place. Still, even graduate work is not entirely chaotic. It naturally falls into two or three cycles. The first cycle should lead the student into a broad acquaintance with his specialty, introducing him particularly to special treatises and to monographic literature; the second cycle should instruct him in methods of research and give him practice therein, carrying along with this a review of the literature of the special topics investigated; and if a third cycle is provided, it should be a seminar where students and teachers come together for the discussion and criticism of original work.

# THE PREPARATION OF A CLASS FOR A LESSON IN LITERATURE

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It was a high school class in English,—a heterogeneous class, as is usual in our cities. A few of the students came from homes of culture, some were foreign-born, many were without literary prepossessions. They were about to read Milton's minor poems, since the college entrance board had so ordered, and also since it is a good thing on general principles for even those who have no thought of college to know something of so great a poet. Prefixed to the text they were using was a not uninteresting life of Milton, and accordingly the teacher assigned it for study, as a reasonable method of arousing interest in the poetry. It seemed to Miss Drake unfortunate that the biography must be studied apart from its relation to English history. After all their arrangements and rearrangements of the various subjects, the faculty had been unable to provide for complete correlation, and Milton had been one of those to suffer. Considering everything, the class did very well with his life. Miss Drake supplemented the text from her own fairly wide store of reading, to the manifest brightening of the general interest. She loved Milton, not profoundly, perhaps, but with a reverent allegiance. She was not many years out of college, and she was full of enthusiasm for scholarship. Her eager spirit carried the class along, sometimes in spite of themselves.

For the next lesson, she told them to prepare *L'Allegro*, by reading the poem first as a whole to grasp the thought, with the aid of certain guiding questions which she dictated, and then by studying it minutely with the editor's notes. She gave the latter directions with some misgivings, for in the past, many of those notes had been to the average girl and boy a stumbling block, and to the foreign-born, foolishness. Yet her ideals of scholarship demanded that her students accumulate what the college professor who edited the poems regarded as a proper equipment for the high school mind. The recitation of this lesson did not quite satisfy Miss Drake. It lacked briskness, verve, joy. Instead of bringing the poetry nearer to the students, the introductory reading of Milton's life seemed to have increased the distance between them and the poet's

thought. Though they obediently pointed out vivid images, they did not kindle to their beauty. Later, when after a similar study of *Il Penseroso* they compared the two poems, it was a little better. They took pleasure in the neat definiteness of this particular comparison; so often the effort of comparing any two matters pertaining to literature was clouded by a bewildering haziness. With *Comus* and *Lycidas* there were more difficulties in the way. In a fashion, it is true, these difficulties were surmounted; the majority of the class passed tests compiled from college entrance examinations, and they wrote papers containing unimpeachably orthodox sentiments concerning Milton and his poems. Yet all the time Miss Drake knew, for she was a sensitive soul, that they had not been really touched; no thought or need of theirs had been expressed by the poet. All that they had gained was information about him, not companionship with him. When the doors of the schoolroom should close behind them, Milton would be locked inside. The precious life-blood of that "master spirit, embalmed and treasured up on purpose for a life beyond life," for them had been ineffectual.

Miss Drake pondered these things in her heart. At first she said to herself that only rare spirits can care for poetry, and that such had been fed in their measure by Milton through her ministrations. The rest, too, had undoubtedly gained something. The exact nature of that something it was not encouraging to analyze, since it was not the one thing that it should be. She tried to console herself by hoping that the rank and file, having been thus introduced to a great poet in their youth, would return to him in after years, feeling then for the first time a real need of him.

Then she sadly recalled the obtuse enthusiasm of certain visiting alumnæ over literature that should have seemed trash to those who had known the best; she remembered, too, glimpses into homes that had remained bookless for years after their sons and daughters had completed courses in high school English. She foresaw a conclusion that to her eyes wore the colors of pessimism: the conclusion that poetry no longer expresses the general life of man; that it has become the utterance of isolated individuals, whose thoughts and feelings are unlike those of the race, and can be shared only by a few kindred spirits.

To assent to this conclusion was to undermine the faith that hitherto sustained her in her work, and to call in question her ultimate ideals. She would yield, however, only under the compulsion of invincible facts. Her years of teaching had not been long enough to furnish incontrovertible proof that literature can be taught only to the few. Perhaps, after all, the

trouble lay in her method of presentation. But had she not been obedient to logic, and to the example of her own teachers? And did she not make the dry bones of mere method alive by sincere love of her subject? Her mind was clear as to these points, and yet— What if she question more closely her own vital experience with books? Not her academic experience merely, save as it was one of many possible means of approach, but rather, as of greater import, those other moments, that, coming often without observation, had opened her soul to the soul of a poet. Scanning these, she noted how many of the books she loved were not hedged about by the paraphernalia of a course of study. True, such a course had sometimes helped to make her ready for them, but their real interest was not, as a rule, primarily dependent upon it. Again and again she had taken up a book with complete mental readiness, with a prepossession in its favor derived from influential suggestions, and yet she had failed utterly to respond to it. On other memorable occasions she had opened a book not knowing what she should find in it; and lo! creation had widened on her view, as the words smote themselves into her consciousness, with such quickening of her whole being that her memory was still keen to all the accompanying sense-detail of such hours:—the flutter of a curtain, the angle of a chair, the falling of the sunlight across the room. So had come to her Wordsworth's great Ode. How she had always pitied those who faced that poem for the first time in a classroom at a teacher's bidding. It was chance then, after all, that ruled. The winds of the soul's moods blow as they list, and it is useless for a teacher to hope to control them. She had circled about to her starting-point.

But upon close analysis these vagrant episodes might disclose something of more practical significance. This mood, as she had called it, this readiness of spirit,—of what did it consist? Always when her own way to a poem was unobstructed, it was because there had been within her some antecedent struggle for expression of the very feeling of the poet; some call, however faint, which he had answered; some need, however incipient, which he had met. At the happy moment of such meeting, the overlying interests of her mind had been stripped away, by chance or otherwise, and the poem had blazed a path into her soul. Mere knowledge was not enough. Similarity of experience there must be, in a measure, on the part of author and reader. Consonance of mood there must be also. To bring about such consonance the teacher must plan delicately and warily. She must first recall the experience freshly to consciousness; she must then, if necessary, induce the mood most favorable for its use. It would not do, Miss

Drake had discovered, to trust the printed words to pierce their way through huddled, unrelated mental images to a memory too feeble to recognize its beautiful kinsmen. It would not always do to depend on a knowledge of the life of the writer to arouse sympathy for anything he might say. She must bring to the forefront of consciousness, she must invest with the deepest possible interest, the personal experience which could reach out hands of unhesitating recognition to the experience of the poet. For poetry, as Keats said, "should strike the reader as a wording of his own highest thoughts, and appear almost a remembrance."

Accordingly, when the time came for teaching Milton to another class, she did not begin with his biography. Instead, she gave a day or two to "oral composition;" an exercise which under her guidance was always full of attraction. She asked the students to describe their ideal way of spending two days, one of which was to be dominated by gaiety, the other by an equally enjoyable pensiveness. She told them to be very specific as to everything they would like to see and hear and do on such days. They responded eagerly and definitely. In many details their imaginations ran closely, though of course they were unaware of the fact, after Milton's. It was clear to Miss Drake that, as far as the themes of the poems were concerned, the students would find in Milton the voice of their desires. The subject-matter being in large measure parallel with their experiences, their minds were free to enjoy the unique beauty of the form. Because they had been seeking an expression for the same ideas, when the poet's adequate phrasing should be presented to them, they could appreciate something of the shaping power of the artist.

Hitherto Miss Drake had always found her classes somewhat balked by the invocations to the poems. Suggestive as they were in this case, the personifications of abstract ideas had seemed artificial, do what she would to vitalize them. Could she not more effectively help her students to appreciate these also? She could at least try. Continuing the oral work, she took up the subject of personification. It was not a new one, for they had studied Greek myths, and had incidentally noted the figure as it occurred in their reading. They now readily recalled the personifications of winds, clouds, thunder and other forms of nature, which they had made as children. They were naturally less ready, however, to give pictorial shape to abstract ideas. Miss Drake called their attention to the use made of such forms in decorative art, showing them many reproductions of sculpture and printing, and dwelling upon the significant details. This gave an impetus to their imaginations, and they made suggestive attempts to image the list of ideas

which she gave them, and which included most of those personified by Milton in the two poems.

The class was now prepared for the text. She assigned *L'Allegro* and *Il Penseroso* for one lesson, giving no specific directions for study. When they met for recitation, she saw that something unusual had happened. They did not wait for questions; of their own impulse they began at once to tell how the poet had expressed their very own thoughts, and how apt his words were, how vivid his pictures, how exquisite his music. As for the explanatory notes, the young students had made the use of them that their needs had demanded, not in anticipation of test questions, but because they desired to know. If their wants were not yet of such sort as to make use of all the learned lumber in the back of the book, what did it matter, since their souls had had sight of the soul of Milton, and he was theirs forever?

Now, because the time was ripe, the students wished to know something about the life of their poet. In answer to their questions, Miss Drake told them his story, and was rewarded a few days afterward by discovering that they had been reading about him for themselves. With this living interest in his life, and with the glimpse into his times that such reading gave them, they could follow an analogous method with *Lycidas*. As a preparation for the poem, they were told about the death of Edward King, about his character and plans, his relation to Milton, and the work he might have done if he had lived. They tried to realize a similar problem for themselves. As they naturally wished to read some elegy as an inspiration, Miss Drake supplied to them, in translation, the Bion and Moschus which were singing through Milton's mind when he wrote his poem. In their planning they began to perceive how such a poem might be shaped. To a considerable extent they anticipated Milton's own sequence of thought, and thus greatly reduced the difficulties of the text. As nearly as was possible for their varying capabilities, they approached the creative mood. Only in this way, Miss Drake became convinced, could the maximum of appreciation be developed.

Thenceforth, when she dealt with subjective literature, as a preparatory step she often led her students to recall or recombine their experiences in such a way as to approximate, as far as might be, the work of the poet. If their past did not contain the necessary elements of the experience, and if she could not actually provide them, it was useless to attempt the study of the work in question. It was not always necessary to spend so much time upon the initial stage, for, earlier than in former years, the blessed time came to her classes when the happy expectancy of the joys to be found in books led them

triumphantly over difficulties to the perception of what the poetry or prose held for them. They grew to love poetry especially, because they believed that in it they heard their own voices glorified.

When the matter of the literature was objective, Miss Drake modified her method. If the material was drawn from history or legend, she would sometimes lead her young folk to conceive the artist's problem, and to suggest some possibilities concerning its solution. Her method of teaching Burke's *Speech on Conciliation* may be cited as an illustration. The historical conditions, naturally, were first made clear. Then the class, imagining itself in the presence of such a House of Commons as Burke addressed, sought for the most cogent arguments for conciliation with the American colonies. Of course they did not light upon all the arguments that Burke's great intellect discerned, but the fact that they had conceived the situation, and had made the kind of effort that he had made, invested the speech itself with the deepest possible interest.

It was not original, you say, this discovery of Miss Drake's. No, it was only the psychological doctrine of apperception extended, in her mind, to include the feelings. What she finally named it to herself was "inducing the creative attitude or mood." Had she studied in a school of pedagogy, had she observed how skillful teachers in primary grades prepare their children to hear certain stories and poems,—how by wisely directed effort in the initial stage they forestall the necessity for explanations, and secure from the outset the intelligent sympathy of their listeners—she might have apprehended the doctrine long before. But she had come from a college, not from a professional school, and she had to work out her own salvation.

Yet even teachers whose diplomas proclaim that they have been rooted and grounded in pedagogical principles sometimes fail to apply this one adequately. The grammar grade teacher, it is true, usually makes some attempt to prepare her pupils for the literature they are about to read; but very often this preparation takes account of facts and words only, and of these perfunctorily and disconnectedly. Sometimes she does nothing more than write on the blackboard a list of the more difficult words in the reading lesson, for the pupils to pronounce and define. Sometimes she assigns for preliminary reading an outline sketch of the author's life, written in bare, reference-book style. Only biographies full of picturesque and dramatic incidents,—and such lives have rarely fallen to the lot of authors read in school—are likely to appeal to young readers. If preliminary interest in the writer is to be aroused,

—and whether such interest should be antecedent to the reading itself is a question—it can be effectively done only by means of an animated, sympathetic account, out of the fullness of the teacher's mind and heart, and not from a book. For other necessary explanations, she often waits until the context demands them, thus marring whatever unity of impression the uninterrupted reading might have produced. As for impressing the unity of thought and feeling by careful preparation for both, she is frequently quite unaware of her opportunity.

Her high school sister is also apt to be lax in these respects. Why delay the pictures and the talk about castle-life and the practices of knighthood until the class has read and faultily imaged the chapter in *Ivanhoe* or the canto in *Marmion* where accurate concepts are so desirable? Knights and castles are sufficiently interesting in themselves to furnish matter for a fruitful lesson before the novel or the poem is touched. Many an allusion, the point of which vivifies a beautiful thought, might have been made clear before it was read at all, and thus idea and expression would have flashed themselves unforgettably into the young mind. To try to do everything of this kind that might be done before the actual reading may in some cases seem a wearisome undertaking; but a little more care in planning the work may bring all these things to pass. If they are really actively present in the teacher's thought, she will find many incidental opportunities to bring them before a class, often long before they occur in the literature read. Many of the words, for example, that are a stumbling-block and an offense when taught in lists, might have become old friends and allies if the teacher had used them in her own vocabulary when occasion invited.

If these things be true of preparation as it concerns the understanding alone, they are still more significant with relation to the feeling with which a young learner approaches literature. Lists of words, and a compiler's sketch of an author's life, are not likely to arouse a desire to read a given work; neither device appeals in any way to the life-experience of the pupil,—to his ideas, his emotions, his potential sympathy with the author's mood. Such an appeal must be made skillfully, by personal talk, by suggestive questioning, by carefully elicited reminiscences, above all, by the contagion of the harmony between the teacher and the author. When such an appeal has been made successfully, the soul even of a child may understand the work of an artist, and the vital essence of a poem may be inwrought into his spiritual fibre.

That the primary aim in teaching literature is culture rather than the mere acquisition of knowledge, has long been conceded by educators, and is acknowledged by every teacher who

loves literature for its own sake. To frame a method of teaching in accordance with this conviction is by no means easy. Even for those who see the end most clearly, the way to it is beset with thorns. Perceiving that her efforts to kindle in her pupils a realizing sense of the power and beauty of a great classic have been only half successful, the discouraged teacher is prone to lay increasing emphasis upon the mere analysis of structure and the study of words, as being at least definite, capable of return from the class, and therefore calculable products. Even though she may have been rewarded with some measure of success in her endeavor to train the feelings as well as the thought-activities,—though she may have seen the light of interest in the eyes of many of her students, and heard from their lips expressions of liking for the work in hand—yet she has moments of doubt as to whether the contact of their souls with a certain poem has been really vital. Will these young people leave Milton and Shakespeare behind them in the schoolroom? Will they be thenceforth carelessly content with books manifestly far inferior to those which she has read with them? Has she succeeded in breaking down the barriers between their lives and the life that is in great books?

Sometimes, it is true, she is blessedly sure of her answer. Some of her students were book-lovers when they came to her, and the way for them was a way of pleasantness and a path of peace. For others, it was her hand that opened the door which no man can shut. But the rank and file!—of these also she must make accounting. For these her wary methods, her vivid suggestions, the power of her personality, have been unavailing. For the sake of these, and perhaps, too, for the better instruction even of those who willingly receive the word and bring forth fruit, this record of a teacher's experience may claim a hearing.

But rivalry is not all directed outward. Shelley gives us a Titanic subjective struggle in *Prometheus Bound*. Hamlet is wrecked by the rivalry of motives. And Scripture gives us the acme of this inner conflict in the temptation. A gigantic inner conflict of good and evil motives, and further declares, "he that ruleth his spirit [is better] than he that taketh a city."

For some rivalry is the mainspring of life and of progress, for others it is the great obstacle that hinders advancement. For some it is an extraneous factor brought in through adverse social conditions, for others it *was* in the beginning and *is* the *primum movens*.

In view of this lack of agreement as to the legitimate place of rivalry, the subject of this study needs no apology. It will be helpful at least to collect and investigate the facts relative to its origin, development, and pedagogical significance. While in this paper only illustrations of rivalry in its different stages can be given, it is believed that the examples cited are representative.

## Animal Rivalry

The first business of the infant animal is to get food, and it is in the food activities that he finds himself involved in conflict with his kind. Struggle for food is practically universal in the animal kingdom. But rivalry for food is not so general. Solitary animals often engage in strenuous activities to secure food, though rarely do they meet opposition from their own species. Social and gregarious animals on the other hand are apt to find kin-companions their most formidable rivals in obtaining food. The mink, for example, seeks food alone, unmolested by companions. He may lay waste a whole flock of chickens with no one to dispute his possession.

The wolf, on the other hand, gregarious and social, is constantly in rivalry with the members of the pack for food. When a wolf scents prey he gives a call to which the pack respond by joining in the hunt. But when the prey is secured mutual aid gives way and rivalry stands out in all its savage vigor. Each wolf tries to get food before the others get it, and to get all he can.

Among the single celled animals we find no activities that can be classed as rivalry. And though the "zoöphytes may compete with each other, their era was one of comparative peace. "But worms," the next and third order in the animal series, "can harm one another. They or their immediate descendants began the battle which still rages." Although the worms began the battle, competition is found among the

zoöphytes. Of these animals Tyler says they "could feel but one emotion, hunger."[1]

It is therefore quite probable that rivalry and battle have been actuated by the need for food.

Passing over the fourth plane of animal life, the fishes, where the struggle for food is perhaps yet too much reflex to be considered other than organic, we come to the reptiles, the third order of vertebrates. While they are perhaps of too low an order to manifest intelligent rivalry, there is manifest affection among even the common snakes. And Delboeuf writes: "My lizards did not vary from the general rule. The best worm was always the one that a comrade had. If it was long, one might witness such a steeple chase as is seen sometimes in a poultry yard." (13, p. 396.)

Food rivalry among birds is general, but chiefly sexual. The barnyard fowl, nevertheless, furnishes ample evidence of food rivalry. The chick has hardly begun to peck before it seems to know that the best worm is the one its comrade is running away with. Of nestlings Dr. Herrick remarks, "they are constantly trying to gain some advantage over each other." My own observations might be taken to confirm the statement. An interesting and aggressive young robin in a nest of two, seemed rather naïvely to appreciate his superior position when he had gotten out on the rim of the nest. Apparently he contrived to intercept the food directed toward his mate in the bottom of the nest, at any rate he often succeeded. The observations credit him with two-thirds of all the food brought to the nest. Among the sparrow nests under observation one contained a lone young; though this bird appeared to be normal and active in every way, it did not manifest the same intense activity in food reactions as did the young of larger families. With all the birds observed, the ones that called the loudest and most frequent got the most food. In one case a female grosbeak neglected one of her young which did not call much until it died.

Domestic animals furnish examples of rivalry no less significant than those of animals in the wild. Louis Robinson has given us a description of hog manners which is true to life.

"When a pig is alone in a sty he will take his meals in an indifferent and leisurely manner, and, as often as not, if abundantly supplied with a "wash" he will leave some of it in the trough until it becomes stale and uneatable. But when several are domiciled together, the beautiful influence of competition, which we so often admire in human affairs, comes to the aid of the former. The instant that the pail is emptied into the hog trough, there is an eager rush to the spot, each pig thrusting its fellows aside, and plunging its snout deep

[1]Tyler: Growth and Education, p. 28.

into the fluid, in order to get as much property as possible into the only strong room he knows of, where his goods are in peace." (42, p. 221.)

The author has not only given a true description of the pig and its manners, but he has stated a belief in the economic advantage of competition, in fattening hogs. The present writer has observed similarly the habits of barnyard animals and is able, not only to confirm the foregoing account, but to add experimental evidence, which seems to show that the animal probably appreciates his relative position with regard to his companions. But so far as the economic advantage is concerned, it is probable that the only gain is that of time, since a lone hog without the stimulus of companions will so accumulate fat that it can neither stand nor see out of its eyes. On a certain Dakota farm it was the custom to take one hog from the flock and place it in an adjoining pen for fattening. It took a few days before the lone hog learned the others could not get at its food. If reflex imitation could account for rivalry then this lone hog should continue to eat ravenously so long as the others were present; it does not, however, but learns to eat leisurely. Should a second hog be placed with the lone animal, rivalry would be immediately resumed.

The wild horse of the mountains and desert often finds itself in strenuous struggle with nature and in keen rivalry with members of the herd. If it is not a good forager, the inclement winter and more alert companions may push it to the wall to perish. The domestic animal, perhaps, no less than the one free and untrained, manifests the same competitive tendency under all conditions of feeding. A horse may not much notice cattle and sheep about him in the pasture, but of his own kin-companions he is very conscious, especially if fodder be scarce, and he is particularly hungry. At such times intimate companionship may not count for much. The recognized superior by quiet but unmistakable signs warns his companions to keep at a safe distance. At the watering place the leader drinks first and is apt to stand guard over the trough long after his thirst is satisfied, as though superiority were a thing of pleasure as well as of use. Feed a horse at the manger and if he is very hungry he may throw out a warning gesture to his mate, though all his life he has been tied so he could not execute his threat. If his master lingers near the fodder he may crowd him with his shoulder if he dare or manifest his anxiety and impatience by quick stepping of his fore feet while he nervously crowds his mouth with food. All of these actions would seem to be reminiscent of times when the horse was not so much in a struggle with untoward nature as in rivalry with the individual animals of the group

for the scanty grass that could be pawed from under the snow, picked from the sage brush on the desert or cropped from the edge of streams trickling from the mountains. Like the hog mentioned above, he seems to realize that he must not only get his food quickly, but that he must get it before the other individuals appropriate it; this which is the chief characteristic of the rivalry consciousness.

The cow, proverbially if not actually very stupid, and the docile sheep, are no less endowed with this impulsive tendency than is the horse. The sheep will bunt her offspring from the trough when they are yet scarcely weaned. The mother cow soon forgets her maternal instinct and enters into rivalry with her young for the fodder distributed in the yard, or for the choice grass of the pasture. Brehm reports interesting cases of animal rivalry, among which is that of a mother monkey struggling against her young for the possession and appropriation of food.

"After about six weeks the monkey began to take other food than the mother's milk and new phenomena appeared. The two animals manifested a wide variation in their mental life. The same mother which formerly took tender care of her young, who without interruption bore him hanging to her body and to her breast, and was so full of mother care, was now ready to snatch the food from out his mouth. The same mother did not permit him, as he began to eat, to lay hand upon but the least morsel of food. As soon as the keeper had given them fruit and bread, she seized it, thrust the young from her, if he approached, and hurriedly filled her cheek pouches before she left it. One greatly erred if he supposed that a nobler impulse than gluttony moved her to this action. She could not suppose it necessary for suckling the young, for she had no milk any longer, neither did she entertain any apprehension that the food would be any harm to it. The young ate the food and flourished on it. Hunger soon made him keen, venturesome and active. He no longer shrank back at the strokes of his mother, and now she pushed him away in order to secure everything for herself. The young was cunning and active enough, indeed, to get a bite and spring around the back of his mother where he devoured it. This foresight was necessary, for the mother many times went to the farthest corner of the room in order to take the food away from her young. In order to prevent injury, which the unnatural feelings might prompt, we gave them more food than the mother could eat or store in her pouches, and thus we helped the young one. It continued in good health and was cherished by the mother so long as it did not take her food." (4, p. 96.)[1]

From the behavior of animals in feeding we not only have evidence of their present psychic reactions, but probable evidence of the social origin and development of rivalry. In case of the dog, it may well be that struggle against its prey was not more essential to its survival than the ability to maintain itself against the individual members of the pack, in which

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[1] Kinnaman: *Am. Jour. of Psy.*, Vol. XIII, p. 134.

case relative position would mean a relative sufficiency of food. On this point Robinson (42, 229) speculates as follows:

"The way in which a cat takes its food is a sure sign that, in its natural state, it is not in the habit of associating with greedy companions. When given something to eat, it first carefully smells the morsel, then takes it in a deliberate and gingerly way and sits down to finish it at leisure. There is none of that inclination to snatch hastily at any food held before it, which we observe even in well trained dogs; nor does a cat seem in any hurry to stow its goods in the one place where thieving rivals cannot interfere with them. Indeed no greater contrast in natural table manners can be observed anywhere than when we turn from the kennel or pigsty and watch the dainty way in which a cat takes its meals."

According to the above theory the cat does not enter into rivalry with its kin-companions for food. The theory, however, does not hold for the infant cat. My observations carried on during the summer of '07, show kittens to have a well organized process of struggling against each other for food. The kittens under observation this summer fought from the very first (26 hrs. old) for the nipple. Each had its place, though not definitely the first few days. The fighting consisted of well co-ordinated movements of all four feet, scratching and striking in a sort of swimming movement, while it hung to the nipple or rooted for it. More particularly of the one who was literally on top did the movements resemble the movements of a terrier dog digging for rats. This struggling ceased largely as the animals grew older and more habituated to their places at the breast. Later, when they were fed from a basin, there was no sign of opposition among themselves; but while feeding from the mother, if one got in another's place he was usually dispossessed. The only emotional reaction that could be detected was in the whimpering tone of the cry as the contest grew more severe.

Conclusions strongly indicated are as follows: That food rivalry is a reaction to an organic sensation; that it came in with the very low forms, became a condition of survival and has been transmitted as an organic habit. This would make it a specific case of natural selection, which seems warranted by facts. From such phenomena as the horses or cattle lingering over water or food after their appetites have been satiated and evidently taking pleasure in 'lording it' over others, we may conclude food rivalry has developed a psychic pleasure in a situation of mastery or supremacy.

The above citations of animal food rivalry are not intended to be exhaustive or unique. They are taken because they are for the most part common and also because they are believed to be typical of animal life in general, and chiefly because the

elements of rivalry are clearly typified in each of the several cases.

*Sex-rivalry.* The following cases are, similarly to the foregoing, selected to cover this particular phase of rivalry, not exhaustively but generally, and at the same time are chosen as type forms.

"The Gasteropada, though capable of locomotion and furnished with imperfect eyes, do not appear to be endowed with sufficient mental powers for the members of the same sex to struggle in rivalry." Of the sea worms (sub-kingdom of the Vermes), Darwin again concludes: All these worm-like animals apparently stand too low in the scale for the individuals of either sex to exert any choice in selecting a partner, or for the individuals of the same sex to struggle together in rivalry.

Darwin quotes a case from the Amphipada that seems to show sexual choice, but involves no rivalry (10 p. 274). He also states, "It is not known that male crustaceans fight together for the possession of the females, but it is probably the case." From the *Descent of Man* we may quote the following cases of rivalry among insects. "That inimitable observer, M. Fabse, in describing the habits of Carceris, a wasp-like-insect, remarks that fights frequently ensue between the males for the possession of some particular female who sits an apparently unconcerned beholder of the struggle for supremacy, and when the victory is decided, quietly flies away in company with the conqueror. . . . . It may be well to remark that insects belonging to this order have power of recognizing each other after long intervals of time, and are deeply attached." (11, p. 296.)

"Some male beetles, which seem ill fitted for fighting, nevertheless engage in conflict for the possession of the females. Mr. Wallace saw two males of *Leptorhyncleus angustatus*, a linear beetle with a much elongated rostrum, fighting for a female, who stood close by busy at her boring. They pushed at each other with their rostra, and clawed and thumped apparently in the greatest rage. The smaller male, however, soon ran away acknowledging himself vanquished." . . . When Mr. A. H. Davis enclosed two males with one female in a box, the larger male severely pinched the smaller one, until he resigned his pretensions." Of another beetle, he states, "The two sexes inhabit the same burrow. . . . . If, during the breeding season, a strange male attemps to enter the burrow, he is attacked; the female does not remain passive, but closes the mouth of the burrow, and encourages her mate by pushing him on from behind; and the battle lasts until the aggressor is killed or runs away."

We may cite one more case of insect rivalry from a recent work and by a careful observer. In his study on spiders Dr. Porter asks the question: "How far is it true that there is a battle for supremacy among the males?" In answer to this question we have the following (11, p. 347): "The males on Fig. 8 did fight for supremacy."

In the case described above, where the male did not succeed in copulating, the two males on the side had an encounter. The one farthest away, or the one I had previously selected as the smallest, retreated; the victor, or second in size, then approached the largest one which happened at the moment to be resting. But the aggressor suddenly beat a hasty retreat, leaving the largest male to continue his attentions. The male of these species do not go through the antics or show-

ing off acts which are found in other species. They, however, do struggle for supremacy, and Montgomery very probably is right when he says that the female chooses that male which "first most surely announces by his movements that he is a male."

"The males of many fish fight for possession of the females." Of the stickleback, he says. "Their battles are at times desperate, for these puny combatants fasten tight on each other for several seconds, tumbling over and over again, until their strength appears completely exhausted" . . . . "when a fish is conquered his gallant bearing forsakes him; his gay colors fade away; and he hides his disgrace among his peaceable companions, but is for some time the constant object of his conqueror's persecution." (This may be on account of the limited size of the cage.)

Darwin also gives a case in which two trout fought all day. Salmon fight in much as desperate a manner as do the sticklebacks or even the seals.

That the above cases should be included under the head of rivalry seems all together justified. When one insect has been defeated it is not pursued; the battle ends. The victim has the opportunity to flee. The tendency is not to continue hostilities until death but only until supremacy is decided. In so far as this tendency prevails among insects, the conflict meets the requirements of animal rivalry, at least in form. By way of contrast we may note the battle of the ants is not rivalry, or that it is more, for here each fights until death comes to one or the other, and destruction of an opponent is the aim, not mere supremacy.

Elliot has given a description of the rivalry of the seals at the rookeries, in Behring Sea. He was on the ground for two years, and his work on the seals is a classic to-day. The male seals come up on land before the females,—take their position upon a few feet of ground and defend it against any rivals that may appear.

"It appears from my survey of these breeding grounds that a well-understood principle exists among the able-bodied bulls, to wit: That each one shall remain undisturbed on his ground, which is usually about six or eight feet square, provided that at the start, and from that time until the arrival of the females, he is strong enough to hold his ground against all comers. By fresh arrivals they are sometimes driven off altogether, or higher up owing to their increased exhaustion from defending themselves along the water line."

Many of the bulls exhibit wonderful strength and desperate courage. I marked one veteran at Gorbatch who was the first to take up his position early in May, and that position as usual directly at the water line. This male seal had fought at least forty or fifty desperate battles and fought off his assailants every time, perhaps nearly as many different seals which coveted his position, and when the fighting season was over (after the cows are mostly all hauled up) I saw him still there covered with scars and frightfully gashed, raw, festering and bloody —and one eye gouged out, but lording it bravely over his harem of fifteen or twenty females, who were all huddled together on the same spot of his first location and around him.

This fighting between the old and adult males—for none others

fight—is mostly or rather entirely done with the mouth. The opponents seize one another with their teeth, and then clenching their jaws nothing but the sheer strength of one and the other tugging to escape can shake them loose, and that effort invariably leaves an ugly wound, the sharp canines tearing out deep gutters in the skin and furrows in the blubber or shredding the flippers into ribbon strips.

They usually approach each other with comically averted heads, just as though they were ashamed of the rumpus which they are determined to precipitate. When they get near enough to reach one another they enter upon the repetition of many feints or passes before either one or the other takes the initiative by gripping. The heads are darted out and back as quick as a flash; their hoarse roaring and shrill piping whistles never cease, while their fat bodies writhe and swell with exertion and rage; furious lights gleam in their eyes; their hair flies in the air and their blood runs down; all combined makes a picture so fierce and so strange that from its unexpected position and its novelty is perhaps one of the most extraordinary brutal contests man can witness.

In these battles one is offensive, the other defensive. If the latter proves the weaker, he withdraws from the position occupied, and is never followed by his conqueror, who complacently throws up one of his hind flappers, fans himself, as it were, to cool his fevered wrath and blood from the heat of the conflict, and sinks into comparative quiet, only uttering a peculiar chuckle of satisfaction or contempt, with a sharp eye open for the next cautious bull or "sea catch." The bull does not fight for the pup if it strays beyond his limits nor does he ever attack a man beyond this area; but will fight to death on his stand in the defensive attitude. (15 p. 265-6.)

All animals engage in sexual rivalry; the deer, horse, sheep, cattle, etc., no less than the seal. But the writer believes that further illustrations would not add materially to our knowledge of the subject.

Sexual rivalry, perhaps, is a different thing from food rivalry, and yet there is much to confirm the theory that it is as much an organic sensation as is hunger and is conditioned upon nutrition. It begins later in the scale of life than food rivalry, and is more offensive, while food rivalry is more defensive. It is more highly emotional. The fact that contest ceases with the subsidence of the sexual emotion would make sex rivalry a special reaction to a special situation and not a general reaction that might be called an instinct of rivalry. Such cases as those of the seal point to a higher development of rivalry. These have ethical significance as well as the appearance of shading off into rivalry for leadership.

*Rivalry for Leadership.* A third form of rivalry among animals is the struggle that determines leadership, or secures to the victor a certain precedence among his fellows. One may say that the results of this form are more complex; that the situation is more social and less objective; in food and in sex rivalry the end is a concrete object; in the struggle for leadership the end is subjective, *i. e.*, for supremacy. It may be that underlying the various forms there is a common impulse

that relates them into a whole, and that no definite distinctions should be made of different sorts of rivalry. However this may be, it is highly probable there is no connection on the psychic side of the animal, though they may be closely connected biologically.

We have seen that rivalry for food is not interfered with by the maternal instinct, and that sex rivalry probably dies out with the subsidence of sexual emotion. In view of these facts it appears that the distinctions already made are justifiable on grounds of behavior. The material on this phase of rivalry is more scarce and less reliable than on that of food and sex rivalry, however there is much that is significant.

Rivalry for leadership probably does not occur among lower forms of animals. It is not at all probable that it occurs below the insects, and is even doubtful if any of the battles carried on by the ants can be included under this head. None lead. All seem to work independently and according to an inner impulse.

The first evident forms of leadership are found when we reach the birds. The writer has observed the wild geese in the wheat fields of Dakota. While feeding, one seems to lead the flock, also when they fly the leader takes the point of the wedge. I have been told by hunters that the flock is thrown into confusion if the leader is shot, and that the wedge does not form again, but that if the other members of the flock be shot the gap is closed up and the wedge goes on without break. I have also observed that the sentinel is not the leader, nor is the sentinel in office very long at a time, but I am inclined to believe the one last to duck its head into the stubble for grain does not do so but remains watching.

For several years I observed the sandhill cranes which fed on the stubble fields in the daytime and flew to the lakes in the evening. Quite frequently before starting on the evening trip a few would engage in what for a long time seemed to be a dance, but on closer observation it turned out to be a pretty definite contest. The birds would jump up striking each other with their wings and clawing with their feet. The pair which settled the contest first would lead the flock; the victor first, the victim next, the flock following. The significance of this contest is diminished when we know the cranes leave the fields many times without such trials of strength. But whatever meaning it can have must be in the line of social adjustment. It is the habit of these birds to go about in flocks of varying sizes from a few to perhaps 50 or 100, and it may well be that this form of rivalry has been evolved to determine the succession.

Many naturalists believe that the singing of birds is almost

exclusively "the effect of rivalry and emulation" and not for the sake of charming their mates. This was the opinion of Daines Barrington and White of Selbame, who have made a special study of this subject. Barrington, however, admits that "superiority in song gives to birds an amazing ascendancy over others, as is well known to bird catchers."

"It is certain that there is an intense degree of rivalry between the males in their singing. Bird-fanciers match their birds to see which will sing longest, and I was told by Mr. Xarrell that a first-rate bird will sometimes sing until he drops down almost dead, or, according to Bechstein, quite dead from rupturing a vessel in the lungs.

That male birds should sing from emulation as well as for charming the female, is not at all incompatible; and it might have been expected that these two habits would have concurred like those of display and pugnacity." (ch. XIII, p. 376-77.)

The above case of rivalry between male song birds may well have in it a large element of reflex imitation. Canary birds sing more vigorously in accompaniment with noises, and all have seen them sing furiously or stop suddenly as a sewing machine was in operation or ceased to run. However, there is an equal chance for pure rivalry to be the motive. Besides it is probable that the singing of the males contains an element of rivalry if the end is to charm the female. In this case, however, the sex element would be divorced.

Writing in the *Century* for 1900, Seton Thompson gives an account of "the national Zoo at Washington," from which I take the following:

"I have heard it said that a little enmity in the life of a caged animal is better than absolute stagnation; but, of course, the enmity must be within limits. The buffalo herd had so far reverted to the native state that the old bull ruled for several years much as he would have done on the plains. He was what the keeper called "not a bad boss." . . . One of the younger bulls made an attempt to resist him once and had to be punished. . . . A year or so later he decided to risk it again. Both charged. But to the old bull's amazement the young one did not go down. . . . Both went at it again, now desperately. . . As they pushed and parried, the young bull managed to get under the other and with a tremendous heave actually pitched his huge body up into the air and dashed him down the hillside. Three times the old bull was thus thrown before he would yield and then he sought to save his life by flight."

Darwin gives a case in which two young bulls unite to defeat an old one. The latter is left for dead, but when one of the young ones approaches the spot two days later the old bull arose, killed the young bull and quietly resumed his position in the herd. (11, p. 512.)

In accounting for the strength of the ox Robinson describes the contests of primitive cattle: "A desperate strife for the

mastery was always going on between the rival bulls which desired to lord it over the rest of the herd.". . . "There is no doubt that the massive fore-end of the bull bison was developed by the habit of using himself as a projectile wherewith to batter his rivals out of the over-lordship of the herd." Robinson observes a complex system of etiquette among working bullocks, that makes it necessary to tie them at the feeding racks in order of their precedence, which is "in some ways as exact and as rigidly adhered to as that at a German court."

My own observations on animals, both domestic and wild, extend over a period of ten years. Most interesting and applicable here is the experience with cattle. In early spring each year cattle were gathered in from the farms over a radius of some thirty miles and driven out on the prairies to graze until winter. This brought together a herd of about four hundred, composed of groups ranging from one to twenty, and of all ages. When they had recovered from the fatigue of the long drive a general free-for-all fight set in, especially among the males, but by no means confined to them. Not infrequently the members of a small group would follow after and attempt to assist one of their number in a contest with some alien. But more generally two fought unassisted with the usual crowd of spectators interested according to their several temperaments. These battles would be settled within a few weeks and the order of supremacy established, but not for the whole season. As the different individuals grew and fattened on the prairie grass the contests would be renewed among some of the stronger. In such cases it was evident that the victim never felt quite whipped; for he would follow his victorious rival about at a safe distance; however, when too close, would look askance and walk stealthily as if tensing the muscles. Then, perhaps, at a challenge from the victor, they would face about with lightning-like rapidity, the struggle would be on, the ground tremble with their charges, while the crowd gathered to witness the duel. These prolonged and intermittent contests took place among the steers, usually the bulls settled their score once for all.

The point of interest, aside from the very evident struggle for supremacy *per se*, is the attitude of the rivals when they meet. Is the feeling of rivalry a psychosis that carries over and remains in memory, or can it be accounted for by the stimulus of each approach? If the latter, we should expect the unfortunate animal to be as free in action and play as his successful rival, which is not the case until he is thoroughly whipped. If this observation is correct, it would point to a set of mind that persists in consciousness and depresses the individual until relieved by a decisive act. After speaking of

the care birds bestow upon their unfortunate companions, Hudson states that "among mammals such equality and harmony is rare. The instinct of one and all is to lord it over the others, with the result that one more powerful or domineering gets the mastery, to keep it thereafter as long as he can. The lower animals are in this respect very much like us; and in all kinds that are at all fierce-tempered the mastery of one over all, and of a few under him over the others, is most salutary; indeed it is inconceivable that they should be able to exist together under any other system." (29.)

These same cattle when sheltered in long sheds for the winter have to be tied in order of their relative supremacy, otherwise one falling between two, both of which were his superiors, would be gored to death. Not infrequently when thus tied in long rows have I known the order of supremacy to be reversed and serious results to follow if the change were not discovered in time to relieve the unfortunate one. It was not necessary that the one at the head should be supreme over the whole line. Very rarely is one animal master of every other member of the group. In this arrangement A would be able to defend himself against B, B against C, but C in turn might be master of A. This, however, would not interfere with the order provided B were placed between A and C. Robinson observes this same phenomenon among bullocks (42, p. 152).

The domestic and half wild dogs give us excellent illustrations of rivalry for supremacy among animals. Peary, in his arctic travels, used a team of forty half wild dogs. Besides the fierce struggles for food there was much energy expended in rivalry for supremacy. Of these half-tamed dogs Peary states: "The efficiency of the teams was very seriously impaired by continuous fighting resulting from the re-arrangement of the dogs; fighting which no earthly power can stop till it has been conclusively decided which dog is the king of each team" (40, p. 448). Whether this re-arrangement was brought about by loss of dogs or was an arrangement according to willingness to go ahead, Peary does not say, but I suspect the latter and that there was no rivalry for head place in the team. The rivalry for place, however, so far as supremacy in the team is concerned, is very evident. Hudson has reported further on this same point.

No less significant to our purpose are the observations and speculative conclusions of Louis Robinson on the domestic dog. His observations on the prevention of internecine struggle suggest the destructiveness of rivalry *per se*. On the other hand, the tense attitude it sustains is perhaps greatly beneficial to the health and functioning of the individuals. We also see

how absolutely necessary is rivalry to any form of co-operation. The foregoing and the following cases suggest very strongly that this is the instinct which not only stimulates the individual, but which holds the individuals together.

"Loyalty to one another is also a virtue which cannot be done without. Thus we see that, however great the emulation between the individual members of the band, while the hunt is on it is kept strictly within bands, and is subordinated to the common purpose. It is only when the game is captured and killed that contests of individuals for a share of the plunder commence. The very fact that an invitation is given to join in the pursuit as soon as the quarry is started, instead of the finder stealing off after it on his own account, is an illustration of this; and if one of the pack is attacked by the hunted animal at bay or by an enemy, his howls and excited outcry are instantly responded to by all within hearing" (42, p. 38). Hudson has observed the interrelations of rivalry and mutual aid:

"On cattle-breeding establishments on the pampas, where it is usual to keep a large number of fierce-tempered dogs, I have observed these animals a great deal, and presume they are very much like feral dogs and wolves in their habits. Their quarrels are incessant; but when a fight begins, the head of the pack as a rule rushes to the spot, whereupon the fighters separate and march off in different directions, or else cast themselves down and deprecate their tyrant's wrath with abject gestures and whines. If the combatants are both strong and have worked themselves into a mad rage before their head puts in an appearance, it may go hard with him; they know him no longer, and all he can do is to join in the fray; then, if the fighters turn on him, he may be so injured that his power is gone, and the next best dog in the pack takes his place. The hottest contests are always between dogs that are well matched; neither will give place to the other and so they fight it out; but from the foremost in power down to the weakest there is a gradation of authority; each one knows just how far he can go, which companion he can bully, when he is in a bad temper or wishes to assert himself, and to which he must humbly yield in his turn. In such a state the weakest one must yield to all the others, and cast himself down, seeming to call himself a slave and worshipper of any other member of the pack that chances to snarl at him, or command him to give up his bone with good grace" (24, p. 336).

"One primary object of a hostile meeting between dogs (as well as between higher animals) is to decide some question of precedence either general or particular. Now, if we could only settle which *was* the best man in any dispute by duels *à outrance*, a great deal of blood would be needlessly shed, and many valuable lives lost to the community. This introduction of moral weapons among social animals is, therefore, a great point gained, for injury to one is injury to all. The quick recognition of the superiority of a foe, and the perception of when submission should take the place of valor, is plainly of advantage to the individual, since a pig-headed obstinacy in resistance would frequently lead to elimination. Where in the serious business of life there is an interdependence of individuals associated for common ends, any influence which lessens the severity of civil conflicts tends to the general well being. Just as commanding officers have forbidden duels between members of an army in the field, so nature has among gregarious animals, and more especially among formidable carnivores, discountenanced internecine conflicts which might weaken the general efficiency of the pack" (24, p. 51).

How far rivalry among animals extends beyond the three

forms already treated is at most a question. That it has become an instinctive response to all situations involving a possible chance of surpassing another we have, I think, much evidence to show improbable. It is an instinctive response only when the situation involves the natural tendencies of the animal. The following instances will serve to illustrate this point, and at the same time to show the limited field in which rivalry works.

In the North of England dog racing has become a popular sport among a certain class of people. The most successful animal at present in this sport is the whippet racing dog. As racing is quite generally held to be actuated by the competitive instinct, I quote extracts from the report of the president of the Whippet Club.

"The best racing whippets are bred like race horses, through a long line of winners. To be of any use the dog must begin its education very young. As soon as it has been weaned it is kept aloof from its fellow-puppies and other dogs. From this day forward it lives the life of a hermit, having no friends and no enemies. The reason for this is that the dog will have to do his racing unjockeyed, so to speak, over a 200 yards course, and from the moment he leaves the "slipper's" hands he must never take his eyes off the "rag" which another man (the walker up) has carried before him up to the end of the course. If, then, he has been in the habit of chiveying playmates, or fighting with strange dogs, there are ten chances to one he will prefer to indulge in these games up the course instead of honestly "running to the rag." If, on the contrary, he has never known the society of other dogs, it will rarely occur to a whippet to molest them. Those who turn out "stoppers," as they are called, are useless for racing, for they will never run in front. At the first Lancaster whippet race I attended a friend told me he was bringing out a whelp for the first time. It was 12 mos. old and had never run in company. I suggested it was a toss-up whether it would "run honest" or not and he was quite surprised at my doubts. But the whelp turned neither to right nor to left, and in company of five screaming dogs and between some thousand onlookers, ran as straight as a line from start to rag."

It seems quite evident without further comment that the dogs have no notion of beating each other, or they would not yield to the impulse of play in the midst of a race. And yet less would there be need of the rag after which the dogs run. It is probably the instinct or impulse to chase or to capture prey that has been utilized in this race that is not a race from the dog's point of view.

Horse racing is sometimes justified on the ground that the horses enjoy the contest. Indeed one often hears and sees the greatest pity for the horse which does not win. That rivalry plays a part in horse racing I think is questionable. Though the horse is very much influenced by the presence of another in the race, this does not signify that he has any clear notion of surpassing an opponent, and still more doubtful if he has

any instinctive tendency to outrun its kind. We do not see horses, either in the wild or in a state of domestication, contest with each other in races. Domesticated horses do run in play, and some particular individuals are generally in the lead. But there is little evidence of a contest, the leader in the play is naturally the swiftest and none run their best. Only under certain conditions does the running appear like a race, as for example should there be a gateway not wide enough to allow all the runners to pass at the same time, one on the outside may make a desperate attempt to get there first, when a race is on between this one and the head one, but when the point is passed the race is over. According to one writer the educability of the horse to racing is due to his sensitivity. This would be akin to reflex imitation. Does the horse learn to enjoy the race and especially to beat an opponent? I think not. A race horse I once owned would run only under certain conditions, viz., those under which he had been trained. This horse had been exercised in running by riding him out a distance of a quarter of a mile from his barn, then turning him suddenly off for a run back. Under these conditions he continued to respond long after his speed had left him, and always with as much vigor as when racing regularly on the track with other horses. Though this same horse was put out to pasture with other horses with whom he often ran in play, he showed no tendency to race, *i. e.*, to be first in the group.

Rivalry for leadership, then, is a struggle for supremacy. It is immediate and generally determined by force. The contestants continue to struggle until both are satisfied—one, that he is the victor, the other, that he is whipped. Individuals of opposing sexes do not generally enter into rivalry for leadership, but it is a law among gregarious animals of the same sex that order of supremacy must be settled on first acquaintance. This is frequently done by a mere show of arms, or it may be that disparity of size settles the question without demonstration. Whatever may be the source of this form of rivalry, it is now quite independent of the forms of rivalry earlier treated in this paper, though the emotions of hunger and sex may enter in as elements.

## II. Human Rivalry

Human rivalry is a subject upon which there is much difference of opinion. The situation takes on the form of a dilemma, one horn of which either party has grasped, without, at the same time, realizing that the problem involves another fundamental side. That it is a fact in human nature and has significance, both for the individual and for society, is apparent. What it appears to be in its incipient stages and in its higher

development the writer has attempted to indicate in the next few pages.

*Infant and Childhood Rivalry.* Though the infant may possess the potential factors of rivalry, the environment of its first years of life is not such as to bring them into prominence. It takes two to bring about a rivalry situation, and usually two of a kind. We are then practically limited to observations on twins, since babes of the same age are not much in each other's company. The following cases are in general characteristic of infant and early childhood rivalry.

"A pair of twin babies, perhaps six to eight months old, were brought to the hospital suffering from underfeeding and its results. They were both pitiable objects, merely skin and bones, but the boy was in worse condition than the girl. They were kept in the same crib and given as full a diet as was safe for their condition, and pushed as fast as possible in the feeding. The girl gained much faster than the boy, and was noticeably more active. Several times she finished her own bottle of milk first and was observed by the nurses to squirm around until she got her brother's bottle into her own hands, upon which she would empty that if she could in addition to her own. The boy ate only slowly and always had to be watched and coaxed to eat, seldom taking his full supply. The discarded bottle, therefore, often served as an additional supply for the girl unless it was at once carried away."[1]

B. One of twin boys 9 months old will snatch his brother's bottle, drink the milk, and then hit him with the bottle.

G. 1½. When mother took up her baby brother said, "Let him cry. Take me."

B. 2. Would not allow sister to touch his toys.

B. 2½. Showed a contorted mask of pain, spirited discomfort, and almost despair on birth of his brother.

B. 2½ having smashed a rival's toy said, "Now I guess you won't play with it." (19, p. 455.)

Infancy, though rich in spontaneous emotional expressions, is not easily analyzable into fundamental motives. For jealousy the infant furnishes a fruitful field for observation, since its emotions are undisguised. But jealousy has behind it a situation of rivalry. Looking upon rivalry as a response to a situation, jealousy would be the emotion resulting from the inhibition of that response. In the case of the twins mentioned above, the struggle is for food. The infant of six or eight months is successful in its efforts. There is no particular emotional expression, and above all no jealousy is mentioned or apparent. The infant perceived the situation, the impulse to get food passed over into action; satisfaction followed, with no farther cause of emotion. There is no evidence for concluding the case to be other than an impulse to take food. The child of nine months has put more zest into his action, and yet to attribute a motive of forethought to a child of nine months is to

[1]Contributed by Dr. Caroline A. Osborne, Worcester, Mass.

overstate and destroy the force of the argument. It is quite probable that the child struggled to get its food, but that there was any motive in the blow with the empty bottle is at least questionable. That it was the result of an impulse for activity is more likely.

The disturbance on the advent of a new baby set up in the life of a child so young as two or two and one-half years is a matter of quite common observation. Judging from its emotional behavior the reaction may quite properly be termed jealousy. His chief concern is the attention of his parents. But if we consider rivalry a struggle for supremacy, then it may well be that the child, in the impulse to maintain his supremacy feels himself outraged at the intrusion. He is thwarted in his attempt, and his feelings overflow into the channels of expressive jealousy.

This jealousy is probably not other than a feeling for self. At this period the child is yet predominately sensuous. Each child has the same biological tendencies and needs. It seeks comfort and needs food, which it endeavors to secure. The mother is connected with both food and comfort, and probably is not much differentiated from either of the child's wants. The fact that a child very readily forgets its mother would indicate that jealousy at this rudimentary stage is no other than a feeling of well or ill being. The interference of satisfaction awakens the storm of feelings or dams up the tendencies and they overflow into emotional expressions.

All life is a reaction to its environment. The infant sets up a vigorous protest if you gently remove its bottle. This act is perhaps wholly an instinctive reflex. It is only one phase of the *will to live*. It is nevertheless an expression of the rudimentary self—a resistance that is basal to positive struggle in self-assertion. How much the cry of protest may be the overflow of feeling in a positive effort to grasp for the lost food cannot be known, but its vigorous movements with arms and legs as well as raising of the head are suggestive of directive muscular effort.

Another phenomenon which may be no less physiological at bottom, but involving a higher degree of consciousness, is the pleasant opposition of the child at about the age of 3 years. Baldwin's little girl (2 yrs.) when told a new taste was 'good' turned away with evident distaste when she had liked the same taste before. "When asked to give her hand into mine . . . she thrust it behind her back." The sight of hat and coat was a signal for a tempest, although she enjoyed out-door excursions. By the 3d year this child had become "as docile an imitator as one could desire."

But of adults he continues, "they seem only to wait indica-

tions of the wishes of others in order to oppose them." (2, p. 145.)

Pres. G. S. Hall, of Clark University, has collected a list of authenticated children's sayings which illustrate the same native tendency. The typical expression is an affirmation followed by a negation, as "I go in water, no!" the 'no' being very emphatic and uttered with great apparent satisfaction. The writer knows a child of three years which delighted in similar mono-debates, taking great pleasure in denying her own affirmative interrogations as, This flower pretty? if the answer was "beautiful" the retort would come with decided stern delight "No—not pretty—ugly!" Royce writes upon the same phenomen as follows:

"Side by side with the social processes of the imitative type appear another group of reactions practically inseparable from the former, but in character decidedly contrasted with them. These are the phenomena of social opposition and of the love *for contrasting one's self with one's fellows in behavior, in opinion, or in power.* These phenomena of social contrast and opposition have an unquestionably instinctive basis. They appear very early in childhood. They last in most people throughout life. They may take extremely hostile and formidable shapes. In their normal expression they constitute one of the most valuable features of any healthy social activity. This fact may be illustrated by any lively conversation or discussion." He makes the "instinct of opposition," lower down and more primitive than imitation. (Outlines of Psy., p. 277,)

Baldwin explains these oppositions as exaggerated instances of control. I should prefer to term them positive impulsive reactions. At least they are not purposive acts of self-control. It may be that this opposition is only a modified form of showing off or an impulse to attract attention by self-assertion. It is none the less a growth of the social ego. And this growth of the ego is the development of rivalry, *i. e.*, the expression of the self in the social environment carries with it an impulse to maintain itself in its new found and wider territory.

Jealousy plays, perhaps, a small rôle as compared with the tendency to hero worship. Children are forced by their very existence into a sense of comparative worth. Say to a child, John draws well and at once you get the prompt response: "I can draw better," or if he cannot draw at all he will inform you he can do something else better. Perhaps he can whip a certain boy and "John can't do that." For the boy, the physical hero is naturally the idol of his life. He wins the admiration of the school. Miss Smith, of the Worcester, Downing Street school, has made careful observations on boys and finds the above to be true, but an interesting excep-

tion proves that the physical hero is not the only one. A boy lacking in all the qualities of a soldier hero, won the admiration of all the school through his knowledge of nature.

Showing off is strongly suggestive of a rivalry consciousness. The cases given here are typical for all ages from childhood to adolescence (23).

No. Age.

5. 2½ & 2. Showing off is characterized by tumbling about to attract attention or turning somersaults for the benefit of strangers.

9. 3. All are typical cases of self-exhibition, excepting one, who boasts, "I can beat you runnin'."

17. 4. Self-exhibition dominant. One case shows definite tendency to compete.

7. 5. Ditto.

6. The coloring is changed somewhat. The child is inclined to make comparisons. He boasts that he can run faster or "I can climb higher than you."

16. 7. The boast has now grown to include parents and relatives. They boast that their parents are greater, can do more than some other child's parents. But also are they elated to be able to say, "I am in the second reader while another is only in the first."

8. The comparative attitude is more pronounced. They compare parents and relatives and also self with others.

12. If any further characterization can be made here it is a more intensive development of the individual.

Perhaps as characteristic a case is that reported by Mrs. Knox of the boy who disobeyed his mother because, as he said, "I wanted to beat you." The 'task' was to say the Lord's prayer, repeating it after his mother. Matronly came the words, "Our Father," but in response came the retort he ain't my father, and so on through the prayer. The morning confession was, "I wanted to beat mamma! Didn't you know that I wanted to beat?" (Janette Hill Knox. Justa Hamlin's Vacation, p. 166.)

Covering a period of 3 years, I had the opportunity of observing three boys, aged 3, 5 and 8. Roughly the results were as follows. Under 4 or 5 the expressions were: "See me jump, run, whirl, or see what I can do." Their playmates were used much as would be any other article for their self-gratification. Any conflict with them was not for the sake of the conflict but to rid themselves of an obstacle. Following the age of 5 the expressions are comparative: "I can jump farther than you," or "I can beat that." Likewise there was at about this time a transfer of interest from the activity of play to the result of the play. It would seem the self began to move through an orbit the centre of which was more often outside the self. And seeing himself in comparison with others the impulse to excel has a concrete and immediate basis upon which to work.

The child is not necessarily selfish, neither is he altruistic.

He is, however, biologically and instinctively self-centred. His incipient social traits are perhaps only the ejects of his own self, which he strives to extend by virtue of the feeling of comparative worth thus brought about.

*Adolescent Rivalry.* The natural unguarded tendency of the pre-adolescent at least of the male, is to struggle for physical supremacy. But with the dawn of adolescence the tendency to broaden out into a wider realm and social and ethical considerations determine the struggle of the individual. On this point Pres. Hall writes as follows: (21, ii: 363). "No creature is so gregarious as man, and we can hardly conceive him other than a *socius*. Individual differences are now greatly augmented. This impresses upon him that he has rank in the social scale and he is eager to know his place above or below. There is a new sense of passing an examination in the world's school and he is eager to stand high upon some of these multiple and lengthening scales. There arises a new social self-consciousness. Fame, renown, glory, leadership may now become ruling passions." Pres. Hall thus emphasizes the new social self-consciousness as a characteristic of the incipient adolescent period, likewise his ideals are higher and further away, now it is superiority—fame and glory. Until now life has been self-centred and egoistic. If it is yet so, it is a larger sense of self, it is one in which the individual finds superiority only as it is builded on the approval of the social environment. Perhaps here is a passing over of the instinct of rivalry from a struggle for supremacy to one of superiority, and we should no longer attribute the impulse of rivalry to the same source. With the new spring freshet, new ativisms appear and all impulses vanish or merge into new ones. One chief characteristic is the nearness of, or perhaps, a deeper interest in the future, due no doubt to the dreams and reveries that well up in the germinating mind.

Studies on adolescence, reverie, day-dreams, bring out evidence of hidden tendencies that incite the individual to strive for superiority. Youth is a period when the individual is pulled strongly in two directions; he hesitates between the longing to be alone and the tendency to seek companionship. Lancaster found that 80% of normal adolescents love solitude, and that 80% of defectives dislike to be alone. (29, p. 97.) Galton concludes that gregariousness is detrimental to the development of individual iniative, and inconsistent in a normal healthy individual of middle life. It may be that the love of solitude, or desire to be alone is the same inner tendency that enables one to resist the pressure of society and stand out against its individual members, as the ox that feeds alone is the ablest leader of the herd. Dr. Theodate L. Smith concludes:

"Dreams of fame and future greatness rarely occur before adolescence. They vary from vague dreams of achieving honors in military or naval service, law, medicine, politics, music, acting, winning social or business success, to the attainment of some coveted school honor, having the highest marks, gaining honors at graduation, or being a leader in athletics. Football captained is often the highest pinnacle of fame to the aspirant to a college career." (22, p. 63.) A fair example of their dreams of superiority is that of a boy who dreams of riding in a bicycle race, winning out while thousands stand about looking on. Partridge's study concludes that "these elements of reverie are survivals of instinctive tendencies that are no longer of the same use they once were, that the function of reverie and imagination in general is to exploit the nascent organs of the mind." If we accept no more than the latter, we are at least obliged to accept the dream tendency as an incentive to action, and this in general is a struggle for superiority.

In response to a questionnaire, one question of which was: In what ways do you inspire pupils to greater effort, by inciting him to surpass his *own* rank in class, his *own* best attainment, the writer received 120 returns containing over 200 cases of self-emulation. The almost universal method is expressed in the words: "You have done well but you can do better," and in the majority of cases the effect was to renew the energy of the pupil. An eminent teacher states it has been a habit with him to point out a good point in an otherwise bad piece of work, but at the same time firmly to suggest further improvement, and this he has found a very great spur and incentive. The bulk of material on this phase of rivalry is pedagogical and we may defer treatment to the section on Education.

The foregoing matter selected from a large mass of data bearing on rivalry and related instincts is illustrative of a genetic sequence in development that is fairly well made out.

The first phenomenon that can be regarded as rivalry is the struggle for food. The child gradually reacts more definitely to comfort and discomfort stimuli; the emotional expressions which accompany such reactions are indicative of jealousy. Closely following this development, is that of contrary suggestion, *i. e.*, the child opposes all suggestion whether pleasant or unpleasant. Another rôle following is that in which the sense of self comes out strongly. The child is ambitious for display of his personal qualities. This leads to a general comparison with his fellows, and together with added interests in external objects develops an increased interest in competition. With the beginning of adolescence we have incipient the final stage in the development of rivalry, viz., a large tendency to struggle in the whole environment for superiority. This

struggle may be of a low or high order of morality, but mere supremacy is not its chief characteristic. In the latter the struggle is characterized by a desire to down a companion, in the former the individual wishes to demonstrate the superiority of his attributes and qualities as greater or larger than those of any others; it is not mere mastery. And the element of self-emulation is probably present in all striving.

*Rivalry in play.* A rich field for the study of rivalry is found in the instinct to play. Life here is unfettered. Emotions are undisguised and spontaneous. Gulick writes: "The chief interests and activities of the young of all races and of the higher animals, centre about play, and in no other direction may we expect to find dominant characteristics exhibiting themselves with the power and charms we may in this spontaneous play life."[1]

Mrs. Gomme has withal made the most extensive study of hereditary games. Her two volumes contain descriptive accounts of over 800 games. And though the object of the investigation was to find to what extent children perpetuate the form of serious activity of adults in their games, and classifications were made to this end, contest games are greatly in the majority. Games of skill and chance are next in number; the author states they are played for the "express purpose of winning property of some sort or to attain individual distinction."

"A survey of the classification scheme of traditional games introduces the important fact that games contain customs; in other words, that games of skill and chance have come down from a time when practices were in vogue which had nothing originally to do with games, and that dramatic games have come down from times when the action they dramatize was the contemporary action of the people." In seeking a psychological explanation for the continuance of games, Mrs. Gomme concludes as follows:

"There must be some strong force inherent in these games that has allowed them to be continued from generation to generation, a force patent enough to compel their continuance and prevent their decay. This force must have been as strong or stronger than the customs which first brought the games into existence, and I identify it as the dramatic faculty inherent in mankind."

After careful study of the above mentioned work the present writer would conclude of the whole as the author has of the "line games": "The chief point of interest lies in the fact that they are all governed by the common element of contest" (17, p. 489). And this conclusion is borne out by Croswell's study

[1] *Ped Sem.*, Mar., 1889, p. 125.

which shows traditional games to be most popular at the age when competition is very intense, viz., at about the 14th year.

This element of contest or of rivalry is not equally prominent in plays for all ages, but has a gradual development, as is shown by the preferences for contest plays as children grow older.

Supt. Johnson finds five characteristic divisions in the play life of the child. In the *first period*, from 0–3, is a gradual development from experiments with the senses to free play. The second period, 4–6, is characterized by greater physical activity and control, is "individualistic rather than co-operative." The third period, 7–9, is marked by a transition of interest from activity for *its own sake* to interest in control of environment and in activity for the *end's* sake. And along with this interest in end and result the elements of skill and competition appear as dominant factors. Johnson adds a list of games involving trials of physical and mental strength, and says "they are generally played under the spur of emulation."

The fourth period, 10–12, shows little change so far as rivalry is concerned, except that self-assertion is prominent and co-operation developing. The fifth period (ages 13–15), is set off by the characteristic adolescent qualities. But significant to our purpose is the fact, as the author states it, that "the game interest centres more and more in co-operative and competitive games." [1]

Similar results were obtained by Zach. McGhee in his study of South Carolina children between the ages of six and eighteen. Games common to the locality were listed and read to the children, who then underscored their choice. 8,718 children were consulted, 3,958 boys, and 4,760 girls. The games were analyzed and classified according to the dominant interests found in them, which interests proved to be as follows: *running*, *chance*, *imitation*, *rivalry*, co-operation. Charts showing the curve of these elements were then constructed. At the age of six, 45% of the choices made by the boys, and 20% of the choices made by the girls were for games of rivalry, while at the age of eighteen these percentages stood 63 and 68 respectively. The curve for both rises steadily, but that for the girls more rapidly and crosses the boys' curve at 17½ years. In this connection it is interesting to note that for the boys the choice for co-operative games about parallels the choice for competitive games, while for the girls the curves representing the same preferences are widely apart. For the boys the choice for co-operative games starts with 28% at six years of age, and ends with 40% at eighteen. At six years of age the girls' choice

[1] Educ. by Plays and Games, p. 207.

stands at 10%. It fluctuates a little from this on and rests again at 10% at eighteen. These results are largely verified by Croswell's study, "Amusements of Worcester Children." He finds: "Eight of the first 10 amusements of the boys, 15 of the first 25, and 30 of the first 50 are of a distinctly competitive character."

The force of the above showing is somewhat broken by the following quotation from McGhee's work:

"These two elements, rivalry, and co-operation are hardly to be compared with the others at all. Wherever rivalry enters into a play at all, it is a 'dominant' element, because the object of the game is to beat the opponent; but the activities, mental or physical, brought into play in doing this, determine the preference for any particular plays. As an illustration, in the games crokinole and parchesi there is the same element, rivalry. In each the object of the game is to beat an opponent: one prefers to do this by excelling in skill another prefers to excel in hunting; and so on." (36, p. 463), and yet, though rivalry is very extensive, the above curve does show the intensity with which it enters into the life of the child. McGhee notes the desire for excellence in connection with rivalry. Croswell says of "the *development and exercise of skill:* It enters nearly all competitive games, where the conscious desire of mastery is likely to be the strongest motive, as seen in the little girl of eleven who liked to play tag best because she could "run fastest." This case is one in which it is not certain whether the love of mastery or the desire to stand first among her fellows is the ruling motive; if the latter, rivalry is the motive force behind skill.

The foregoing studies on play and play life lend support, not only to the great rôle rivalry plays in childhood and youth but also in large measure confirms the genetic sequence already mentioned. The works of Johnson, McGhee, and Croswell, especially reinforce each other on the point of gradual extension and intensifying of the instinct of rivalry from childhood up to adulthood.

We have seen that rivalry is in its first crass beginnings struggle for food, that in its varying forms through pre-adolescence it is desire to be first, but that adolescence introduces various elements which make for indefiniteness in the working of this impulse. The writer believes that at this period there is an incipient underlying motive which marks the higher development of rivalry. This motive we may designate by desire for superiority. Chiefly to make clear this point I present the following material on the primitive American. It is perhaps too limited in scope; but from the vast mine of literature on

primitive people in general, this is illustrative of both the adolescence of the race and of the individual.

Culin has classified the games of North American Indians under two heads; chance, and skill. (10, p. 5.) Games are universal among the Indians of America and almost an integral part of his life. Dice is played by two or by any even number of persons. This game is usually played for a wager and thus takes on the nature of gambling, but this perhaps serves only to augment the feeling of rivalry, not to lessen it. We might say of all North American Indians: "Most of the leisure time, either by night or by day, among all these nations is devoted to gambling in various ways. . . . Every day and night in the soldier's lodge not occupied by business matters, presents gambling in various ways all the time; also in many private lodges the song of hand gambling and the rattle of the bowl dice can be heard."

After describing the order of the game the report adds: "At this stage of the game the excitement is very great. The spectators crowd around and intense fierceness prevails. . . . If the loser be completely ruined and a desperate man, it is more than likely he will by quarrel endeavor to repossess himself of some of his property, but they are generally well matched in this respect, bloody struggles are often the consequence. . . . It is, however, considered a mark of manliness to suffer no discomposure to be perceptible on account of the loss, but in most cases we imagine this a restraint forced upon the loser by the character of his adversary."

There are a number of instances, where there is no stake for which to play, in which general jollity prevails; but the awkward play brings out a whole repertoire of gibes for the benefit of the unfortunate.

"Challenges were often sent from one village to another and were even exchanged between nations, to a contest of some of these games. In such cases the chosen players of each community or nation were called out to contend for the prize of victory. An intense degree of excitement was aroused when the champions were the most skillful players of rival villages or adjacent nations. The people enlisted upon their respective sides with a degree of enthusiasm which would have done credit both to the spectators and contestants at the far famed Elian games. For miles, and even hundreds of miles, they flock together at the time appointed to witness the contest.

"Unlike the prizes of the Olympian games, no chaplets awaited the victors. They were strifes between nation and nation, village and village, or tribe and tribe; in a word, parties against parties, and not champion against champion. The prize contended for was that of victory; and it belonged,

not to the triumphant players, but to the party which sent them forth to the contest." (10, p. 115.)

Morgan states further that when the contest was not between the divisions above named or on a formal challenge, "the community would arrange itself on opposite sides according to their totemic origin, and in this fashion contend for the prize, often families would be divided and on opposite sides. . . . . The excitement and eagerness with which he watched the shifting tide of the game was more uncontrolable than the delirious agitation of the paleface at the race course, or even at the gaming table, their excitable temperaments and emulous spirits peculiarly adapted them for the enjoyment of their national games."

Dr. C. Lumholz writing of the ball game, a very popular game among Indians, says, "there is no prize given to the runners themselves and they gain nothing by it unless in helping their neighbors to win wagers." Of the women he writes: "Women hold their own races, one valley against another and the same scenes of betting and excitement are to be observed, although on a smaller scale." (10, p. 675.)

In a report from Fort Sumner, New Mexico, John C. Cremony states that "foot racing is a frequent diversion reverted to by the active and restless Indians, and the women generally manage to carry off the palm, provided the distance is not too great."

The above citations are representative of North American Indians, at least. The contests, in almost every case, can be resolved into a struggle for personal distinction, and this distinction is won by demonstrating one's comparative superiority over that of his fellows. So well satisfied is the victor that, unlike the Olympian winner, he is not even awarded a badge. There is often manifest fierce vengeance when a loss, not of material worth, but of personal distinction, is sustained. Or it may be the feeling for supremacy is satisfied by seeing a rival with a besmooted face. In a vast majority of cases the stake is not sufficient in value to warrant the demonstration of feeling accompanying the reward. The author has witnessed many of the games played by Indians of the West and Middle West, and thinks the thing always uppermost in the minds of the participants is the desire of superiority. It is never difficult to detect this emotion, though many of the Indians are stoical and try to suppress any expression or show of feeling. The careful study of the life of the Kwakiutl Indians by Dr. Boas reveals this phase of human nature perhaps better than any other work extant on primitive people. For its great significance and direct bearing on the problem in hand I give it at length.

The Patlatch, an institution which pervades the whole social life of the Kwakiutl Indians, is actuated by a spirit of rivalry. A child is given the name of the place in which it is born to be kept for one year. At this age it receives a second name and its parents give a paddle or a mat to each member of the clan. When ten or twelve years old it is given a third name, and the boy must distribute single blankets or small trinkets among his clan or tribe. (He is liberally assisted by elders and parents.) The unit of value was a single blanket (3, p. 341).

"Possession of wealth is considered honorable, and it is the endeavor of each Indian to acquire a fortune. It is not the wealth he desires so much as to be able to give great festivals. His importance is augmented as he is able to distribute more and more property with each succeeding festival." Therefore boys and men are vying with each other in the distribution of property. Boys of different clans are pitted against each other by their elders, and each is exhorted to do his utmost to outdo his rival.

And as the boys strive against each other, so do the chiefs and the whole clan, and the one object of the Indian is to *outdo his rival.* Formerly feats of bravery counted as well as distributions of property, but nowadays, as the Indians say, 'rivals fight with property only.' The clans are thus perpetually pitted against each other according to their rank. The Kwakiutl are counted as the highest in the order given in the above list (omitted here). In intertribal rivalry they do not strive against each other, but the Kwakiutl against other tribes."

"There is still another method of rising in the social scale, namely, by showing one's self superior to the rival. This may be done by inviting the rival to a festival and presenting him with a large number of blankets. He is compelled to accept these, but is not allowed to do so until he has placed an equal number on top of the pile offered him. . . . He then becomes debtor to the amount and must pay it back with 100% interest" (3, p. 343). A similar proceeding takes place when a canoe is given to a rival, the latter when the canoe is presented to him must put blankets on it to one-half the value of the canoe. . . . Later on the recipient must return another canoe with an adequate number of blankets as an 'anchor line' for the canoe."

"Still more complicated is the purchase or the gift, however one chooses to term it, of the 'copper.' All along the North Pacific coast this copper is used. Its actual value is slight, but its fictitious value is determined by the number of blankets it represents at different sales. . . . When the buyer is ready, he gives to the owner blankets to $\frac{1}{8}$ its value. The owner of the copper loans these blankets out. When he has called them in again he repays the purchaser with 100% interest."

"Coppers are always sold to rivals, and often a man will offer his copper for sale to the rival tribe. If it is not accepted, it is an acknowledgment that no one in the tribe has money enough to buy it, and the name of this tribe or clan would consequently lose in weight. Therefore if a man is willing to accept the offer, all the members of the tribe must assist him in this undertaking with loans of blankets."

The rivalry between chiefs and clans finds its strongest expression in the destruction of property. A chief will burn blankets, a canoe, or break a copper, thus indicating his disregard of the amount of property destroyed and showing that his mind is stronger, his power greater than that of his rival. If the latter is not able to destroy an equal amount of property without much delay his name is 'broken.' He is vanquished by his rival and his influence with his tribe is lost, while the name of the other chief gains correspondingly in renown.

"Feasts may also be considered as destruction of property, because

the food given cannot be returned excepting by giving another feast." The most expensive sort of feast is the one at which enormous quantities of fish oil are consumed and burned, the so-called "grease feast. Therefore it also raises the name of the person who can afford to give it, and the neglect to speedily return it entails a severe loss of prestige" (3, p. 354).

"Still more feared is the breaking of a valuable copper. A chief may break a copper and give the broken parts to a rival; if the latter wants to retain his prestige he must break one of equal value or greater, and then return the fragments of both to his rival." The latter may then pay for the copper which he has thus received. The chief to whom fragments were given may break his own and throw both into the sea. The Indians consider that by this act the attacked rival has shown himself superior to his aggressor, because the latter may have expected to receive the broken copper of his rival in return so that an actual loss would have been prevented."

"Property may not only be destroyed for the purpose of damaging the prestige of the rival, but also for *the sole purpose of gaining distinction.*

"The distribution or destruction of property is not always made solely for the purpose of gaining prestige for one's self, but it is just as often made for the successor to the name" (3, p. 357).

As in the plays of the North American Indians, so here in the *Patlatch* the desire for self-exaltation is not so much to put down as to be superior to another. And it may be added not so much to lead or control as to stand out as the greatest.

The rôle rivalry plays among the Wakiutl people is very great. It begins in childhood and extends on into old age when it ends only by striving for the successor to the name. Thus the fundamental impulse is at once individual and social. There is a desire and a struggle for property, but the peculiar method of giving away and destroying it makes it secondary to the more spiritual desire for superiority, which property mediates. This is shown conclusively in the fact that destruction of property is the greatest testimony to greatness. He thus shows his "mind stronger, his power greater than his rival." In the cases cited above it would seem this higher form of rivalry fosters self-control, honesty, and square dealing. On the co-operative side it is a strong factor in cementing the social fabric together.

*Rivalry and Mutual Aid.* The different meanings attached to the term rivalry are not without significance. The Greek word ζγλος = eager rivalry, emulation (also jealousy) the root meaning is probably "to boil," hence an ardent or passionate emotion. βγλοτυπία = rivalry (envy) ἡ ἅμιλλα = a contest for superiority, rivalry, ἡ παδαζγλωσις = emulation, being a rival with another, in which παδὰ indicates reciprocity of action with another. The different meanings in the Greek we find, then, to be ardent emotion, superiority, and an element of co-operation with, not antagonism. The origin from the Latin is seen in the use of the word "rivalus," "one who has a right to the same brook," involving essentially the thought of co-operation or sharing.

The German language has the word *Wetteifern* or *Wetteifern mit.* While the French lexicon gives the secondary meaning as *rivaliser avec.* It is significant that in both French and

German the preposition *with* and not *against* is used. The Swedish tongue has the word *Taflan*, which means to vie without any special color, and secondly to contend with another for a position. *Tflaan*, a synonym for *Aregirighet* is honor plus jealous desire or jealous desire for honor.

In organic life mutual aid is a factor closely related with rivalry. Lower organisms present close analogies to voluntary mutual aid. Bose, basing his conclusions on experimental evidence, finds that "the plant persists, . . . . because it is perpetually in tune instead of perpetually at war with its surroundings."[1]

Magee writes: "Although the animals and plants of Papagueria display pronounced individuality, and although some of their most prominent features are adaptive devices for securing independence, a striking peculiarity of the region is the co-operation among living things. Along the lines of groundwater the species are measurably or wholly antagonistic to their neighbors of distinct species; but over the arid uplands and in the broad waterless valleys all plants co-operate not only with plants of distinct species, but with animals, for the maintenance of common existence."[2]

Kropatkin asserts, from what seems to be adequate data: "Happily enough, competition is not the rule either in the animal world or in mankind. It is limited among animals to exceptional periods, and natural selection finds better fields for its activity. Better conditions are created by the *elimination of competition* by means of mutual aid and mutual support." A striking illustration given is that of a Molucca crab. He reports: "One of them had fallen upon its back in a corner of a tank and its heavy saucepan-like carapace prevented it from returning to its natural position, the more so as there was in the corner an iron bar which rendered the task still more difficult. Its comrades came to the rescue and for one hour's time I watched how they endeavored to help their fellow prisoner. They came two at once, pushed their friend from beneath, and after strenuous efforts succeeded in lifting it upright, but then the iron bar would prevent them from achieving their work of rescue, and the crab would again heavily fall back."

Mutual aid in human society, especially under adverse conditions, is, perhaps, no less frequently met with than in other organic life. Darwin has said: "Not until we reach the extreme confines of life, in the arctic region or on the borders of a desert will competition cease." (11a, p. 95.) Peary has virtually reached the confines of life in the arctic region, and has

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[1] Bose: Plant Responses. Longmans, p. 753.
[2] Magee, W. J.: The Beginning of Agriculture, p. 364.

indeed found competition a small factor and mutual aid the rule.

Of the Smith Sound Eskimos he writes: "This little tribe . . . they number but one hundred and fifty-three in all . . . is found maintaining its existence in complete isolation and independence, under the utmost stress of savage environment, without government, without religion, without money or any standard of value. . . . With habits and conditions of life hardly above the animal, these people seem at first to be very near the bottom of the scale of civilization, yet closer acquaintance shows them to be quick, intelligent, ingenious, and thoroughly human." . . . Every man owns the whole country and can locate his house and hunt where his fancy dictates. The products of the hunts are common property with slight limitations, as, for example, anything smaller than a seal is the property of the hunter who captures it; yet unwritten laws require him to be generous even with this, if he can do so without starving his own family." "In disposition and temperament these people are a race of children, simple, kindly, cheerful and hospitable." (40, p. 492.)

Rink, who is an authority on the Eskimos, says of their social customs: "*All kinds of game or animals which happened to be rare*, on account of size or other unusual circumstances, were more than ordinary species considered common property." (Tales and Trad. of Eskimo People, p. 28.) Nansen dwells more especially on the sociability of the Eskimo: "*His first social law is to help his neighbor.* . . . Hospitality to strangers is a no less binding law among the Eskimos than helpfulness to neighbors. The traveller enters the first hut he comes to, and remains there as long as convenient. He is kindly received and entertained with what the house can offer, even if he be an enemy." Even a murderer is treated as well though hated. Upon the hospitality and mutual aid Nansen observes: it "is of course forced upon them by their natural surroundings, for it often happens that they are overtaken by storm when far from home, so that they are compelled to take refuge in the nearest dwelling-place." (37, p. 117.) "A hard life has taught the Eskimo that however capable he may be, and able as a rule to look after himself, there may come times when, without the help of his fellow men, he would have to go to the wall, therefore it is best to help others." Nansen laments that, as he advances in civilization, the commandment—'all things whatsoever ye would that men should do to you, do ye even so to them,' seems to lose its power over him. (37, p. 116.) "Greed and covetousness—vices which they formerly abhorred above everything—have taken possession of them, their minds are warped and enthralled by money." (37, p. 336.)

Madam Pommerol says of the inhabitants of the Sahara that the people of the towns and the nomads are enemies by caste and race, but allies in interest. The nomads need refuge and shelter. The townspeople need messengers and transportation. Hence, ties of contract, quarrels, fights, raids, vengeances, and reconciliations for the sake of common enterprises of plunder. (44, p. 18.)

Not unlike the mutual aid of the Eskimos which Peary and Nansen describe is that found in the slums of large cities. Jane Addams, who is an authority in this field, writes in her Democracy and Social Ethics, p. 19: "A very little familiarity with the poor districts of any city is sufficient to show how primitive and genuine are the neighborly relations. There is the greatest willingness to lend or borrow anything, and all the residents of the given tenement know the most intimate family affairs of all the others. The fact that the economic condition of all alike is on a most precarious level makes the ready outflow of sympathy and material assistance the most natural thing in the world. There are numberless instances of self-sacrifice quite unknown in the circles where greater economic advantages make that kind of intimate knowledge of one's neighbors impossible. An Irish family in which the man has lost his place, and the woman is struggling to eke out the scanty savings by day's work, will take in the widow and her five children who have been turned into the street, without a moment's reflection of the physical discomforts involved."

From the foregoing data it appears that mutual aid is a factor in evolution no less than rivalry. But the question remains whether or not they are mutually exclusive of each other. That they are instinctive and are found in the same organism or animal is evident. Magee lays particular stress upon the co-existence of co-operation and strong individuality in the same plant. The case of the aid rendered the unfortunate crab by his companions is no disproof of the force of rivalry. The writer has noted that the cattle of the pastures and prairies do not thus assist unfortunate companions but habitually gore to death any one of their number which may be fast or seriously disabled. These same cattle join forces in fighting a common enemy, as a dog, an intruder from another drove, or a human being. Everywhere we see evidence of co-operation against enemies, or for advantage in struggle for existence. In my study of birds in the wild, I have found such instances. On disturbing a robin's nest the alarm given brought a large number of robins from all parts of the forest to attack the intruder; but hardly had the new-made flock disbanded when the male robin cruelly expelled a member of his first brood

from the tree in which was situated the nest of his second brood now four days old, and summarily dismissed a fellow male which had lingered too long about the premises he had come to assist in defending. We have already noted the case of the dogs which co-operate in the hunt but compete in devouring the prey.

Among human beings co-operation or mutual aid may under certain conditions be the first law, as we have seen is the case with the Eskimos and inhabitants of the slums. But it is seen to give way when external pressure is removed. The Eskimos assert their individuality when the support of their fellows is not immediately imperative. It has been noted, as we see in the foregoing citations, that mutual aid and co-operation are natural when environmental conditions are hard and pressure falls upon all alike.

Whether this shall be taken to indicate the dominance of rivalry over co-operation and to signify one as less or more generic than the other, is in the writer's opinion a problem. It perhaps would point to man's being first social, then individual, and that over-individuation takes place when the natural environment, *i. e.*, inorganic nature, is less resistant to the needs of the individual. The view taken by Cooley is that "neither is prior in time nor lower in rank than sociality," but that they are complimentary aspects of the same thing (8, p. 11).

In locating rivalry, we are forced to place it among the social elements. It could not have developed outside the social group. Perhaps rivalry began when the first cell divided and each separately entered the same field for the same food. No doubt the first struggle was for nourishment, but the individual in the course of development found himself thus acting against his kindred companions, and a part of the energy expended in obtaining food must be expended in thwarting others in a similar quest. It would be another thesis to show how society has developed out of this rivalry in life. For our purpose it is sufficient to note, as we have above, its probable origin and its place in the social whole.

## III. Rivalry in Education

The two opposing views, one individualistic, the other social, now so prominent in various interests of life, together with the tendency to characterize American schools as effeminate, should make the subject of rivalry a vital one to education. The aim of the writer is to present, in the following pages, such data as shall indicate the rôle rivalry has played in pedagogy from primitive times to the present. The material gathered from various available sources is much condensed, but it is

believed a fair perspective has been given of each system mentioned.

### A. Rivalry in Different Countries

*India.* Philosophically the Hindu has no occasion to compete with his fellow men; for him things of this world tend to evil. Besides the belief in metempsychosis makes it necessary that he should treat his fellows with kindness, and still more, the final absorption into the all, nirvana, leaves no room for favoritism in his heaven. The ideal is complete abnegation of the self. The great stimulus may come from the relative progress the self makes toward complete absorption. The aspirant must attain to the superior state through self-effort, and it is possible that through this sort of self-emulation the Hindu is sustained in his efforts toward the ideal and superior state. By way of parenthesis we may note here that the Hindu has attained to a recognized superior intellectual plane, and that he has done so without the distracting influence of active rivalry.

The Hindu is noted for his calm self-possession and peaceful disposition, likewise for the mild discipline of his school and the absence of competition. The laws of Manu state that instruction shall be given without unpleasant sensations and that the teacher shall use sweet and gentle words. So true do they seem to be to Manu's law, that teaching in the elementary schools was largely a matter of mutual instruction, a sort of spontaneous co-operation, which gave birth to pupil teaching. However, harsh discipline and rivalry were present. There is an Hindu maxim that the child's bones belong to the parent and its skin to the teacher. The child early at school was branded "chief," the tardy child, laggard. A dash of cold water was also allowed as a means of discipline. Hindu education is sustained, then, by means of rewards and punishments which tend to foster rivalry. In its highest phase, however, self-emulation is the chief stimulus.

*Egypt.* The data available on early Egyptian education is in general of doubtful authenticity. However, there is very plausible evidence at hand regarding the attitude of teacher to pupil, and the method of stimulating to industry. A boy writing to his former teacher respectfully recalls: "Thou didst beat my back and the instruction went in at mine ear . . . (17, p. 329). Thou hast made me buckle to since the time I was one of thy pupils." Likewise did they appeal to the child's love of ease, popularity and power: "Behold there is no profession which is not governed. It is only the learned man who rules himself" (17, p. 328).

"He whose name is unknown is like the heavy laden don-

key; he is driven by the scribe. Therefore set to work and become a scribe, then thou shalt be a leader of men." The deeds of Nechtsotep, a most excellent scribe with an understanding heart, who knows everything, who is a lamp in the darkness before the soldiers and enlightens them" (17, p. 381), are set forth in a book very much used in the schools The pupil was also led to compare himself with others. "The books are already in the hands of thy companions," is the savage admonition of a tutor. But the teacher's chief support was the rod. He argued: Animals are trained by beating, why should not boys likewise be broken in? "The youth has a back; he attends when it is beaten" (17, p. 330).

It is withal quite clear that education in Egypt from a very early date has been extremely artificial, and that the dominant, childish instincts were suppressed. The motives addressed are fear, selfish desire for personal comfort, and general supremacy. In so far as supremacy and superiority are emphasized the appeal is to rivalry, but the rod is the chief stimulus to study.

*China.* Education in China has been sustained and promoted chiefly by appealing to the instinct of rivalry. An examination is held once a year in each county (hien). Boys just entering their teens, and frequently men in the seventies, take part in these examinations. The test is on penmanship and grace of diction, and the reward is the degree of "Budding genius," which exempts the recipient from liability to corporal punishment, and in social standing raises him above the common herd. The successful candidate finds himself one out of one hundred on the highway to the next examination, which is held once in three years at the provincial capital.

This trial extends over three sessions of three days each, and aims to test the candidate in both prose and verse, also on the extent of his reading and depth of scholarship. Again his reward is honor, not pay. He is privileged to wear a cap with gilded buttons of high grade, to erect a pair of lofty flag staves before the gate of his family residence and to place a tablet over the door which proclaims to the world that he is a literary prize man.

The following year the final test for office takes place at the capital of the empire, extending over thirteen days. This examination places the successful candidate firmly in line for a position—mayor or sub-mayor, with chances of promotion. There is yet another chance to compete before the emperor, who may select one from hundreds as laureate. He is the consummate flower of literary perfection—one in four hundred million.

The child's preparation for this competitive machine is par-

ticularly devoid of rivalry. At the age of seven or eight years he is sent to school where he learns by rote the Chinese characters. He studies by himself and recitations are individual. For any lack of diligence or failure to recite well, he is thwacked on the head with a stick. Martin writes: "It would seem, indeed, as if the wise ancients who devised it (the discipline) had dreaded nothing so much as early development, and like prudent horticulturists, resorted to this method for the purpose of heaping snow and ice around the roots of the young plant to guard against its premature blossoming. . . . Even the stimulus of companionship in study is usually denied." "At this period fear is the strongest motive addressed to the mind of the child. Severity is accounted the first virtue in a pedagogue, and its opposite is not kindness, but negligence."

There are but two roads open to the youth of China; trade or the classics. The former is so much inferior that the latter is chosen by those who seem to have a chance at all. And having once chosen his career there is no chance of success excepting by the way of competition for office.

Even in so stereotyped a system of education as that of China the stimulus to intellectual achievement is not simple. However, it does not seem to come from anything inherent in the subject matter of study, but rather from external sources. The honor of being above the common herd we have seen is very strong. The exemption from corporal punishment is likewise desirable and gives one a semblance of supremacy. The glory reflected upon forefathers and family is not an inconsiderable motive. Social standing is a strong inducement and yet the feeling of approbation need not enter here, for society is bound to applaud, not because the hero has pleased them, but because he has achieved an intellectual feat that can have no bearing on their welfare. The selfish motive predominates, and Martin has pointed out that often the official incumbent is tyrannical in proportion to the difficulty he has experienced in passing the examination. The fault of the system is not in the use of rivalry, but in the lack of it. Rivalry is stereotyped and grooved. Superiority is not achieved through personal struggle with one's fellowmen, but upon one's standing in a set and determined scale. The whole man with his natural endowment is not brought into play, but only so much as will allow him to master the classics.[1] The present best account is that given by Martin (35).

*Greece.* Education in Sparta and Crete was a life of contest. Rivalry was a constant factor, but unlike the Athenians the

[1] The Chinese educational system has been much modified within the past three or four years, but no authoritative account has yet come to hand.

Spartans were given to harsh and cruel methods. "The older men stirred up quarrels among the boys in order to see who was plucky. Fighting was encouraged at all ages; there were organized battles somewhat resembling football matches, for the epheboi. . . . The epheboi fought with their hands, kicked, bit, and even tore out one another's eyes, in the endeavor to drive the opposing team back from the water." [1]

"The grown men were also encouraged to fight by the following device. The Ephors selected three of them who were called Hippagretal. Each of these three selected one hundred companions, giving a public explanation in each case why he chose one man and rejected the others. So those who were rejected became foes to those who were selected, and kept a close watch over them for the slightest breach of the accepted code of honor. Each party was always trying to increase its strength or perform some signal service to the State, in order to strengthen its own claims. The rivals also fought with their fists whenever they met." [2]

"There were posts of honor and of dishonor, as in battle, cowards usually receiving the latter." [3] Cretan boys were always fighting either single combats or combined battles against the boys of another club school" (18, p. 37). "On certain fixed days "pack" joined battle with "pack," to the sound of lyre and flutes and in regular time, as was the custom in war, fists, clubs, and even weapons of iron might be used. It was a regular institution, half dance, half field-day, with fixed rules and imposed by law."

"Every city, and probably most villages, had local competitions annually, and in many cases more frequently still, in which some of the "events" were reserved for citizens, while others were open to all comers. There were separate prizes for different ages, the ordinary division was into boys and grown men. . . . These competitions were no doubt largely athletic. But music was usually provided for as well, and in many places there were literary competitions" (17, p. 63). It appears that different fraternities gave prizes annually to the boys who made the best recitation. Kritias took part in the competition when ten years old.[4]

Spartan education was not all harsh; "every boy had a tutor, selected through mutual esteem, bound together by no economic ties, but by those of friendship and affection" (36, p. 78).

Education in Athens, however, quite as much as in Sparta or in China, was stimulated by competition, and the child as

[1] Paus. iii, 14, 2 (18).
[2] Paus. iii, 14, 2.
[3] On festive occasions.
[4] Plato, Tim. 21 B. (18, p. 63.)

much driven as led. "He cannot say anything without their setting forth to him that this is just and that is unjust, this honorable, that dishonorable; . . . do this and abstain from that, and if he obeys, well and good; if not, he is straightened by threats and blows, like a piece of warped wood. . . . When the boy has learned to read, they put into his hands the works of great poets, which he reads at school. In these are contained many admonitions and many tales, and praises and encomia of ancient famous men, which he is to learn by heart in order that he may imitate or emulate them and desire to become like them" (Plato, Protagoras).

"Games and physical contests were not indulged in haphazard as with the modern youth. Nor were the standards of excellence the same as modern ones. Success consisted not so much in the winning of the contest as in the evidence given of the proper form of the exercise, the graceful and dignified carriage, the control of temper, and of skill" (36a, p. 88). And Laurie writes:

"The Olympic dust was the richest treasure which a young Greek could gather. . . . Here the victor was raised to the elevation of the gods themselves. Poets like Simonides and Pindar sang immortal songs in his praise; the best cities were anxious that he should be enrolled among their citizens; and when he reached his home, the gates and part of the city wall were pulled down in token that a city which produced such men needed not the protection of walls" (30, p. 113).

"And for what did they contend? Not for money rewards, but for glory alone—their success being signalized by a reward in itself worthless. At the Olympic games, an olive crown or garland; at the Isthmian, one of pine; at the Nemean, one of parsley; at the Pythian, apples from the trees sacred to Apollo; and at the Panathenaea, olives from the tree of Minerva" (30, p. 213-14).

*Rome.* It is not probable that the Romans conceived of any milder incentive to study than the strap. Laurie (30, 344) refers to Horace's Orbilius Plagosus (Ep. II, 1, 70), who transferred to the school the discipline he had learned to suffer and enforce as a soldier," also quotes Martial (IX, 69) who says:

> Despiteful pedant, why dost me pursue,
> Thou head detested by the younger crew?
> Before the cock proclaims the day is near
> Thy direful threats and lashes stun my ear. (30, p. 344.)

This is no doubt a fair sample of the incentive offered the Roman schoolboy. Quintillian gives a reminiscence which indicates that rivalry is beginning to take the place of harsh punishments.

"I remember a practice that was observed by my masters,

not without advantage. Having divided the boys into classes, they assigned them their order in speaking in conformity to the abilities of each, and thus each stood in the higher place to declaim according as he appeared to excel in proficiency. Judgments were pronounced on the performances; and great was the strife among us for distinction, but to take the lead of the class was by far the greatest honor. . . The 30th day brought the vanquished an opportunity of contending again. Thus he who was most successful did not relax his efforts, while uneasiness incited the unsuccessful to retrieve his honor. I should be inclined to maintain, as far as I can form a judgment from what I conceive in my own mind, that this method furnished stronger incitements to the study of eloquence than the exhortations of preceptors, the watchfulness of *paedagogi*, or the wishes of parents."[1]

Spartan education represents a type of training in which rivalry is dominant but from which the fighting instinct is not separated. Rivalry in its purest form exists between pupil and pupil; between groups of pupils, and between different schools. The incentive to rivalry was the arousal of the primitive emotions—anger and hatred. Punishments were administered but rewards consisted of approbation rather than material gains. Athenian education, besides having all the above mentioned advantages, has inherent in it what has been called self-rivalry. It reveals as the dominant motive in rivalry, superiority. But also there is the element of self-mastery, which necessitates that the individual surpass himself quite as much as his fellow competitors. Besides the above it is evident that the whole self is brought into play in the rivalries, whereas in the preceding systems and in many that shall follow the lines of rivalry are narrowed to a small number of human attributes. We may also note the falling out of harshness of treatment as the type of rivalry rises, and supremacy is replaced by superiority.

*England.* It seems a far cry from ancient Greece and Rome to modern England, but something of the same educational method has prevailed in the English schools. An official report for 1864 (41a) contains sections on "punishments and stimulants to industry" which might be written "appeal to rivalry" without doing injustice. The nine public schools, to which chief attention is paid, present some minor differences, but in general they reveal the same attitude toward rivalry.

The following is characteristic of the reports in general. "The chief punishments at Winchester, as elsewhere, are flogging and impositions. The practice of giving impositions to be written out is, however, adopted more sparingly and the latter

[1]Institutes of Oratory, ch. II, p. 18.

alternative of setting them to be learned by heart more frequently than in some other schools. Flogging, which is administered publicly (as a general rule) and by the head and second masters only, has greatly diminished in frequency. "When I was here," says Dr. Moberly, "in my boy time, there was a very large number of boys flogged, and nobody cared about it." "I have known 20 in a day, and all for slight offences. Sometimes boys did not answer to their names in time. Now we punish in this way very rarely. There are now from 10 to 20 floggings in a year, perhaps in some years a few more." (41a, p. 153.)

"It occasionally happens that a boy begs for a number of stripes instead of writing a composition. Caning and birching, however, have become less common; and in most public and grammar schools where they still exist, they are resorted to only in the case of serious moral offences;" some schools advertise, *e. g.*, "discipline is maintained without corporal punishment or impositions." At Winchester we still see the inscription:

"*Aut disce, aut discede; manet sors tertiacaedi.*"

"Above this inscription there is a mitre and crosier as a reward for the first; an inkstand and a sword for the second; and a birch rod as a symbol of the third." (41a.)

Corresponding with the decrease of flogging we have the competitive system strengthened. "The system of promotion at Winchester is nearly the reverse of that at Eton. At Eton a boy rises in the school chiefly by seniority; at Winchester his rate of progress is determined by his success in an incessant competition, in which every lesson and every exercise counts for a certain numerical value, and which never pauses or terminates till he reaches the Sixth Form. Places are taken in every division below the Sixth Form, and each boy receives for each lesson a number of marks answering to the place he holds in the division at the end of the lesson. Thus if he is twentieth from the bottom he receives twenty marks. . . . At the end of every week the marks gained for all the lessons are added up, and the same thing is done at the end of every month. The record of each boy's progress is called the "classicus paper." The promotion of each boy at the end of a half-year depends on the number of marks he has obtained in the "classicus paper" during that half-year, with the addition of those which he has gained (if his place in school is below the senior part of the Fifth) for "standing up" at the end of the summer half." (41a, p. 147.)

"There are prizes of books given by Lord Saye and Sele to the two boys in each class who obtain the greatest aggregate of marks in the half year." (41a, p. 149.)

In commenting upon the deadening influence of mechanical

instruction, Wiese says: "Imagine a highest form as I have witnessed it, in which Thucydides or Tacitus is read; the master has the author before him, together with a list of the pupils. His questions are put according to the order in which the pupils sit, and for every answer he adds a number to the name of the pupil who has answered; it is the number of marks which the answer merits! This process was repeated several times during the same hour, and after it the pupils crowded around the desk to learn the number of marks they had gained, and each one then entered the number in a book for himself. At the end of a week, the marks are summed up to be afterwards considered when the prizes are distributed." (47, p. 185.)

We should not pass without notice the "merit money." Merit marks are given. Monthly they are counted up, and when merit money is deserved it is awarded in proportion to the boy's place in class. (41a, p. 313.) (Highest merit is 6s.)

At Harrow, "the number of smaller prizes given, in the shape of medals or books, for performances in special subjects, is very considerable." (41a, p. 219.)

In general, the competition for the annual prizes is one of the most thorough and satisfactory parts of our school work. The excitement among the boys in the upper part of the school in connection with them is very intense, and it is felt to be an honor to any one in the house that a prize should be gained by a member of the house.

"We believe that we do no injustice to Eton in saying that it employs sparingly—more sparingly, perhaps, than any other great school,—the spur of emulation. In the system of promotion, the hearing of lessons, even the awarding of prizes, there is comparatively little of direct competition and the distinctions which are given are not conspicuous enough to make them objects of general ambition or respect. Instead of emulation, reliance seems to be placed on the sense of duty, the influence of association of parents and of tutors, and what may be called the mechanical movement of the school; there has been an aversion to positive pressure of any kind, a great reluctance to exclude on account of mere backwardness, whether caused by idleness or by incapacity; a strong and laudable anxiety to afford all the boys as much liberty as they could safely enjoy, and ample scope for healthly amusements." (41 a, p. 90.)

Though quite generally accepted as the chief means of stimulating to effort, the use of rivalry has been questioned in English pedagogy as elsewhere, but with the final result that competition of some sort remains as a stimulus. (41a, p. 89.) Mr. Birch, of Eton, complains of the difficulty of "creating" honorable emulation among the boys, and the committee find what rewards and distinction remain "for want of that pub-

licity which makes awards effective, and of that general competition which brings out all the highest talent at once into the field, do not appear to tell much upon the school." (41a, p. 90.) The committee finds the work of Eton not up to standard for lack of emulation.

The spirit of rivalry fostered in the public schools is quite as evident to-day in the more modern elementary institutions—The Board Schools. Philpott, member of the Sandon School Board for thirty years, describes the elaborate system of prizes and rewards, with approval: "Some of the children are entitled to wear almost as many decorations as a victorious general; eight, nine, even ten medals are the testimonials both to punctual habits and good health which some of them can show. There is one family which proudly displays fifty-two medals, each representing a year's perfect school attendance on the part of one of its members, and in a great many households, the books won by the children make a brave show in the sitting room, forming often the great bulk of the home library. . . . . The award of a banner to the class making the best average attendance for the week has tended to enlist public opinion on the side of regular attendance, not only the natural and honorable ambition to do better than other classes is aroused by this means, but also the equally natural, if less exalted desire to secure certain small privileges which the teacher may have desired for the winning class." (41, p. 91.)

The use of rivalry is thus not essentially different from that of half a century earlier. But "the tendency is to increase rewards and diminish punishments." (41, 64.)

In 1873 periodical displays in physical exercise were organized. "The competition for these banners became very keen, and in 1896 it was decided that the competitive element should be excluded from the displays." (41b, p. 115.) The London School Board provides prizes and medals for regular attendance, conduct and industry. In 1902 there was distributed 70,848 prizes, 33,309 medals. 15.9% of average attendance received prizes and 10.4% received medals, which represents an increase of 50% over 1888. (41b, p. 151.) To foster games such as cricket and football, leagues have been formed and matches between the various schools in the leagues and between North and South England "are contested with the greatest keenness and are marked by sportsmanlike behavior, good temper and unselfishness on the part of the players, . . . not only are the teams interested in the matches, but this interest is shared, by the rank and file of the schools, and it causes among the youngsters an amount of emulation to qualify for selection which has a most beneficial effect upon them and constitutes one of the best aids to discipline. It possesses

many other advantages such as mixing the boys of other schools; giving them self-confidence and increasing their self-respect." (41b, p. 241.)

"Only slight corporal punishment may be inflicted, and this only when other means have been tried and failed." This rule enacted by the London County Council in 1904, is significant; at least, it shows that corporal punishment is not popular. On the other hand means for fostering rivalry are, if anything, more numerous in the Board Schools of to-day than in any of the other schools. The great publicity given the successful contestants in school affairs, together with the system of competitive examinations for civil service, makes the subject of rivalry a social one, and the interest in education is not very much unlike the interest in true sport.

Wiese, writing in 1877, describes how prizes and rewards have not only permeated the Educational Department, but the whole social system as well. A father asks of his son, "how many prizes have you won?" not "What have you learned?" A wealthy man boasts that his son has won a number of prizes, that he has won scholarships at school, and is now working for one at the University. A Scottish mother asks her child what place he has at school, *i. e.*, his relative rank in class. And thus like a modern sportsman the English student receives his laurels.

In other European countries the appeal to rivalry in school work is not as great. For some account of the rôle it does play, especially in France, one may consult the paper by Mlle. Berillon, L'émulation scolaire, Révue de L'Hypnotisme, Vol. 23, (3).

*United States.* Discipline in the early American schools was severe and often harsh, as may be seen from the following typical incidents. "I won't be struck for nothing," screamed the urchin, "then I 'll strike you for something," replies Sawney while the rattan whizzes about his ears (the boy had committed some indescretion). Active and passive tense of verbs is taught with the same instrument. "Well, mutton head, what does an active verb express?" After a little delay,—"I'll tell you what it expresses." He resumes, bringing the stick down upon the boy's haunches with decided emphasis: "It expresses *action* and necessarily supposes an *agent* (flourishing the cane which descends as before) and an object acted upon, as *castige te*, I chastise thee; do you understand now, hey?" (25, p. 47.) Many such instances might be supplied but the above is representative. E. E. Brown, writing of "boy life in the old schools," says: "emulation was freely employed, and the position of head of the class had strong attractions for some young scholars." However, severity was the rule and the following is more characteristic of discipline in early days: "Trouncing was performed by stripping the boy,

mounting him on another's back and whipping him with birch rods, before the whole school." (25, p. 79.)

From the foregoing accounts we see that the nature of discipline though harsh was not altogether without its humor, and though severe it was at times a half buffoonery sort. The young American was asserting his characteristic individuality that we find so well portrayed by Holmes a little later. Martin thinks this sort of discipline characteristic of the times. C. Thomas gives his experience which squares with the above accounts.[1] The "rules for the ordering of the town school at Dorchester, 1645," while they accord full power of discipline to the teacher yet manifest very decidedly a fear that punishment may be too severe if not excessive. Note, *e. g.*, the *9th Order.* "And because the rod of correction is an ordinance of God necessary sometimes to be dispensed upon children, but such as may easily be abused by overmuch severity and rigor on the one hand, or by overmuch indulgence and levity on the other, it is therefore ordered and agreed that the schoolmaster for the time being shall have free power to minister correction to all or any of his scholars without respect of persons according to the nature and order of the offense should require."

The academies show the same sort of discipline. "Dr. Waddel conducted an academy at Wilmington, D. C., during fifteen years, beginning with 1804. He was strict in discipline and did not spare the rod. He insisted on thorough work and steady attention to business and stimulated bright boys as well as the backward."

Along with the intellectual awakening in America, the subject of emulation comes up and receives much attention in educational circles. The discussions were precipitated by an address "On Substitutes for Emulation," delivered before the American Institute of Instruction in 1831, by John S. Parkhurst (1, Vol. II). Two opposing views were presented. On the one hand, "it was urged that rivalry was inconsistent with the law of loving others as ourselves—that it was not the spirit of the gospel, or of heaven. It was admitted that the love of approbation and the love of power were natural principles; and if approbation and power were sought with a view merely to good objects, they were allowable and useful. But that to seek to obtain these at the expense of others—to desire that others should be *second* in order that we may be first (as the spirit of rivalry necessarily implies), is inconsistent with the character and precepts of the Saviour."

"On the other hand it was argued: That there were ranks

[1]The Frontier School Master, p. 247.

in heaven—that rewards were there bestowed according to merit—that emulation was a natural propensity to be found even in animals—that it existed in all men—that he who should be without it would be a brute, or something lower in the scale of being—that there were indeed abuses of this principle, but that there was also a noble *emulation*."

The interest in emulation and rivalry at this particular time is probably due to various causes, the unravelling of which would be the work of the sociologist. It was due to the *Zeitgeist* no less perhaps than was the individualism of the renaissance. But there is much evidence that it was brought to a focus by direct influence of European thought. American educators visited Europe and returned enthused with the non-emulous spirit advocated by Rousseau and practiced by Pestalozzi and his followers.

Woodbridge, one of these Pestalozzian enthusiasts, opens his Journal[1] with an account of the auto-enthusing spirit of Hofwyl (1, VI, p. 401-4). "Positive rewards are excluded, no less than positive punishment. That they may excite to greater exertion is beyond all debate. But it is by appealing to *appetite*, or *avarice*, or *selfishness*, or *vanity;* and thus impairing the habits of self-government, of *benevolence* and of *humanity*, which it is our great business to strengthen. . . . There is *neither first* nor last at Hofwyl—neither rewards nor *medals*, nor *prizes* nor punishments, which have humiliation for their object. . . .

"Not less evident is it from the experience of Hofwyl, that premiums and distinctions, and other means employed to excite the principle of *emulation*, are equally unnecessary to secure industry and love of study. All these motives are banished from Hofwyl; and yet my own experience and observation, and the remarks of others who have long known the institution, satisfy me that in few institutions is there so much disposition to application or so much faithfulness in the pupils, in employing all their powers in the fulfillment of the task assigned them."

Several articles follow on the use of emulation, most of which are in harmony with the above account. Only one, Joseph Emerson, stands out as a staunch advocate of rivalry. Aside from the discussions between the years 1830 and 1836 pedagogical literature reveals no further great interest in the subject until the present time. Col. Parker advocates self-emulation, and the Dewey movement contains much of this nature. Jackman takes a positive stand which is not unlike that of the movement in the early decades of the 19th century. He writes: "Regardless of outward forms and of protestations to the

[1] Annals of Educ., 1830.

contrary, the real end of the school has been and still is the individual for himself and not the group." [1]

"Under the old ideals the children must exert themselves to excel each other. Under the new, members of a group must exert themselves to help each other." [2] Thus the same problem remains and the discussions are not much unlike those a century ago, excepting that corporal punishment is tacitly assumed to be out of the question. Rivalry, though not much talked or written about, is nevertheless inherent in the school system, chiefly in examinations and promotions. Examinations are a vital problem to-day, as is evidenced by the great body of literature on that subject. Perhaps the competitive examinations are an adaptation to the more refined and higher evolution of the instinct of rivalry. At present its evils are legion, though it remains as the great stimulating factor in our school systems.

Further instances of the use of rivalry in America might be presented, but I reserve the concrete cases for the following section, and merely note here that the genesis is the same for America as for other countries with the exception that the new movement of co-operation involves an appeal to many motives and tends to give the instinct of rivalry wider and freer scope.

B. Rivalry as a Pedagogical Device. Having considered rivalry in its larger aspects as found in the educational systems of countries we have remaining the systems and devices of lesser extent. Among such the Jesuits' method of appealing to rivalry is easily the most systematic and effective. The following selections illustrate the essentials of this method.

"The class is divided into two sides, which go by the names of Romans and Carthaginians (or Greeks and Trojans), and each boy on one side has his rival opposed to him on the other. When any boy is put on in his lesson, his rival stands up with him and detects any mistake he may have made. If these mistakes are detected rightly on each occasion, there is a mark made for the conqueror. Then the rival is put on, so as to give his adversary the opportunity of doing the same for him. At the end the marks are counted up and whoever has the most is declared victor in that particular engagement. . . . . About every month, the victories are counted up, and whichever side of the school has the majority gets a half holiday which the others have not. . . . Perhaps two or three times a term, the master will pick out a few of his best boys and bring them before the staff of the college, the superiors, in parties, and they will examine each other in their lessons, two and two, and a victory gained under these circumstances counts double." This is part of the general system everywhere. It applies throughout the school, "except in the three higher classes, though they have their division and stand up

[1] Social Educ. Quar., Mar., 1907, p. 56.
[2] *Ibid.*, p. 67.

with each other, there is not the same detail in declaring victories, because they look upon it as a little *infra dig.*"[1]

"Anything skillfully invented, admirably explained, gracefully said, by any scholar, might be put up in a public place as a memento to the perpetual fame of that scholar throughout the learned world. In the middle of the schoolroom or in a corner a dunce bench was kept which was known by some opprobrious name such as the 'gate of hell,' etc.; whoever occupies this seat is to be branded with some mark of reproach and to wear an humiliating motto. He may be released from this position if by a perfect recitation or superior essay he surpasses one of his fellows."[2]

This scheme of utilizing the instinct of rivalry is sometimes alleged to be inherently vicious, but such could not have been the spirit of its institution. "*Unde philautiam et inanis gloriae cupiditatem a se modis omnibus extirpare nitentur!*"[3] "Let them root out from themselves, in every possible way, self-love and the craving for vain glory." (24a p. 90.) Hughes continues: "What is appealed to, is the spirit of emulation, and that by a world of industries; which, disguising the aridity of the work to be gone through, spurs young students on to excellence in whatever they undertake, and rewards the development of natural energies with the natural luxury of confessedly doing well. In the dry course of virtue and learning, satisfaction of this kind is not excited in the young, without a sign, a token, a badge, a prize. Then they feel happy in having done well, however little they enjoyed their labor before." . . . . "And if not all are victorious, all at least have traversed the strengthening probation of struggle."[4]

"The humanists would languish in obscurity if they had not the philosophers and theologians to be witnesses, spectators, and applauding auditors of their literary achievements." . . . The philosophers and theologians, when composing the prefatory essays for

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[1] Kingdon's Evidence before the Schools Inquiry Com., 1868, Vol. V, Answers 12,228 ff., Perfect of Stonyhurst.

[2] Barnard's Amer. Jour. of Educ., Vol. 5, p. 227, tr. from Von Raumer's Hist. of Pedagogy.

[3] See Monumenta Germaniæ Paedagogica, Vol. II. p. 161.

[4] "Robert of Sorbonne, the founder of the College of the Sorbonne, had put it down in one of his six essential rules for the scholar, that 'nothing is perfectly known unless masticated by the tooth of disputation'" (249, p. 208). The excesses to which emulation may lead is guarded against by the founders of the *Ratio*[4] but great stress is laid upon its virtues. "In short," writes Hughes: "It is well established by the authority of the gravest men, and by the test of experience, that one disputation does more good than many lectures; not to mention the other consideration, that there is nothing more calculated to render our schools illustrious than making our students competent to win great approbation and applause, in public sessions and disputations." (24a p. 210.)

[4] *Ibid.*, p. 210.

their disputations, call for the taste of the humanists, by whose verses and orations, moreover, they are refreshed from time to time."[1]

The Fathers made provision for keeping up interest in disputation and for keeping it within sensible limits. "When the dispute has been sufficiently exhaustive, let him (the instructor) briefly define and explain it"[2] The extent of its use is also indicated as not to be above two hours a week.[3] Hughes, drawing from the "*Monumenta Germaniae Paedagogica*," writes of the conferring of degrees on the student: "He has now passed through long series of yearly examinations, which were almost always disputations, and that, not with equals, but with four or five professors."

If the Jesuits have pushed rivalry to the extreme, they have practically eliminated corporal punishment from the functions of the teacher. And this in a time when flogging was the rule. The Jesuits believe in rivalry as a stimulus to industry, but they do not believe it is the only one which will arouse the boy to action. Schwickerath writes: "What is appealed to, is the spirit of good and noble emulation,—*honesta emulatio*, as the Ratio says."

The one thing in the Jesuit system of emulation which distinguishes it from all others, is the various grades of rewards, and the fact that two or more competitors receiving the same credits likewise receive each a prize. The class contests so much written about, are confined to the formal side of learning, such as conjugations in Latin and Greek, and are never the regular thing. In short, they have been used to stimulate interest in a dry subject. At present in this country the contests are confined to the secondary schools, though prizes are offered in college. A number of educators of the Jesuit Order have expressed to me the opinion that their method of appeal to competition would not work as well in America as in Europe, owing perhaps to difference of temperament. A more intimate acquaintance with the history of the Jesuits and their present institutions, the writer believes, should do much toward justifying the appeal to rivalry. "Men find pleasure in the cap and gown, in titles and degrees, and in stripes and badges of great societies, even while they smile at the 'stars', 'honor rolls' and 'rewards' of the school boy; they have uniforms, coats of arms, chaplets and medals of honor, but regard the 'brave' with his war paint and his girdle of scalps as grotesque. All these emblems help one to see himself as others see him and are marks of attainment or efficiency."[4] Perhaps

[1] *Ibid.*, p. 147.
[2] *Ibid.*, Vol. V, p. 292.
[3] Loyola, p. 213.
[4] Small: Psychical Relations of Society and Solitude, *Ped. Sem.*, Vol. VII, Apr., 1900, p. 33.

the old system of prizes and badges is nearer the natural impulses of mankind.

There is some suggestion of the Jesuit principle of rivalry having spread in pedagogical practice and theory. Comenius used and advocated practically the same principle of emulation as did the Jesuits.[1]

Quick favored it in a modified form, and there are devices in use to-day which might easily have been suggested by the Jesuit principle of emulation; a few of these are as follows:

Class Match in Penmanship. Two or three classes meet, draw a number, put number on paper instead of their own name. If there are 70 in the three classes then there will be 70 numbers and MSS. Papers are collected, divided into three equal heaps and marked by three different teachers, and finally the average of each class is taken. The class getting the highest average wins.

Arithmetic Match in same school: Principal sends note to each class to select 50% (or 75%) of the class to contest for honors at say 3.30 P. M. Each class proceeds to elect its best mental arithmetic talent, electing with great rapidity by nomination. Each class numbers its own members from 1 to 25 as may be. Each class appears in the assembly hall seated by itself. The principal calls five numbers. These then sit upon the platform. Problems are read one at a time. When he thinks sufficient time has been given he signals for answers to be written. When five problems are given they change papers, answers are read and marked, then returned to owners and read again to provide against error; each five averages its per cent. and a record is made. These are seated and five others called and the process repeated. The average of the averages is taken and the honor won.

2. The marks of every boy are given out for each week. A supper is given at the end of a quarter if marks come up to a certain standard. He puts up each week a list of "Furtherers," *i.e.*, of the boys who have surpassed the average, and of "Hinderers," *i.e.*, of boys who have fallen below it. Quick adds: No doubt this is an effective spur, but I should fear it would, in practice, deliver the hindermost to Satan. The boy whom by nature is made a "hinderer" is likely to have by no means a good time in that house.

In New Orleans, a Mr. Chambers gives an account of how he organized 16 boys into teams of four, making up scratch pairs, *i.e.*, bright and dull boy. The match between the teams was to see which could get the best record for the month. We are told that the sharper boys managed with more success than the masters to let light into the dull intellects of boys in the same team with themselves. This union of the "strong" with the "weak," as the French call them, is a good feature in combats of sides.[2]

By no means should all such schemes be credited to the Society of Jesuits. Rivalry had been consciously recognized as a universal human trait long before Loyola. An illustration is the educational scheme set forth in the Talmud.

Corporal punishment was discouraged, and genuine affection existed between pupil and teacher, so much so that a pupil often followed his teacher when the latter left one place for

[1] Great Didactic, tr. by M. W. Keatinge, 1896.
[2] New York, Sch. Jour., Dec. 8, 1888, Quick, Educ., Ref., p. 530.

another. And yet the Talmud places its sanction on the use of emulation. Two or more should study together in order to acquire a certain acuteness and sagacity, irrespective of their relative degree of capacity." "Iron sharpens iron, so one pupil stimulates another." "One of the most important ways of learning is disputations." (43, p. 47.)

*Self-rivalry.* There is a counter-movement, opposing rivalry, which lays stress on mutual aid and co-operation. The editor of the *Annals of Education*, in 1820, solicited contributions treating of the use of emulation in schools. He received several replies, most of which dwelt on the evils of rivalry showing the disasters following its use, and the great advantages of leaving it entirely out of school discipline. D. R. Hall, an active teacher and somewhat of an educational reformer, writes of his experience of 15 years. He used all the common means to stimulate pupils, giving "tickets and rewards to the successful competitors, with the usual result: jealousy of the successful one and laziness on the part of the hindermost. When he substituted 'interest' for rivalry the results were reversed: "better lessons, regular attendance, much more affection and kindness among pupils." (I, v. 2, 205-209.) Many others reported, who verify the above in every particular. The Ipswich Female Seminary reported a complete abolition of competitive methods. Even examinations were individual and private so as to avoid all rivalship." (I, v. 3, 75-80.) The University of Nashville reported excellent results after a trial without competition for several years. (I, v. 3, p. 107.)

Perhaps no one has had greater success in the use of self-emulations than Le Père Girard. He not only redeemed the schools of his town from degradation, but wrought so great a change in the disposition of the people as to render police unnecessary. From an account of his work I cite the following paragraph.[1]

Natural emulation is that which results from the simple union of children. It is one of the privileges of public education. Artificial emulation is the result of the establishment of favors which they obtain by being the first among their comrades, who become their rivals. It is this that Père Girard declares as absolutely contrary to a good education. The school of Friburg distributed prizes in the annual reunion. That reunion became a veritable solemnity because the people came there in crowds, and because the prefect of the school seized this opportunity to address them in a discourse full of life and interest. But the prizes were accorded to all pupils who had

[1]Monographies pédagogiques, F. Payot. Lausanne, Fr. (1896). p. 73-99.

complied with certain determined conditions. No one was able to envy his comrade who had borne from him the prize. In theory all might have it, the condition imposed in order to receive a witness of satisfaction was not *to be the first* but *to have done well;* these two formulæ, by their diversity, show the difference between the intention to do well, which is the source of all progress, and the desire to be the first, which is the product of artificial emulation. The desire is more active in the life of children than in adults. An education well directed ought not to excite it in making use of it, but to combat it in the interest of the good of the individual and of society.

M. Marty (33, p. 71 ff.), director of literary studies in l'École Alsacienne, writes of the change in that school from rivalry to one of self-rivalry. The founders of the school decided that emulation led only to vanity, that to measure one's self with others may be wholesome for some, but for others it serves only to puff up their vanity or to discourage. It is much more efficacious to compare one's self with one's self. Particularly is this true with children who develop very late. A pupil may be marked and measured by a pupil more mature or less bright. The true and fecund emulation is that which leads the child not only to compare himself with a rival, but also with himself. The school of Alsacienne has established a principle which gives to the pupil not only a place, but a mark denoting the value of his competition. One might be first with a mediocre mark, but his work would not be great. One might be last and always last, but if he began with zero and rose to the mediocre, it shows that he is in the line of progress. And in the place of being jaded and eternally vanquished he is encouraged.

In the second place the system offers the same opportunity for noble rivalry that is needed to give to society that élite it needs. And this is done again not only through written tasks, but with due emphasis on the moral. More prizes, not fewer, are given.

The Minister of Education in 1881 saw fit to speak of this school as follows: "I admire most your system of rewards. In France, where public education seems to take delight in developing our natural faults, you are the first to have the courage to suppress that *appareil vaniteux et sonore*. . . . You do not establish that hierarchy too often *illusore*, sometimes unjust, always puerile. And when the day of public judgment arrives you say with a simplicity that has its grandeur, "these have done very well, these well, these have also done their duty well."

England, the one country which approaches China in its competitive examination system, is not without advocates of

self-emulation. Quick doubted much of the supposed advantage of rivalry. "When the number is small," he says, "the master can get emulation enough. When I had only one pupil I managed to make him compete with himself, and he was immensely delighted to find how his pace improved."[1] Miles is a strong advocate of this same method. He would make all struggle for higher development a contest to be won; *e. g.*, anger may be regarded as an opponent to be overcome in a play spirit. "I have managed," he says, "to appeal to three otherwise thoroughly dishonest business men by urging them to play the game and be sportsmanlike; one was an American, one a German, one an English Jew. Every other appeal had failed; this appeal succeeded at once" (34, p. 451). "All competition should really be against the past and present self" (34, p. 350).

Some experimental evidence can be cited against the extreme use of rivalry in schools. The only laboratory study of competition now published shows both good and bad results. The task in this experiment by Dr. Triplett was to turn a reel until certain signs appeared, in the shortest possible time. 40 children between the ages of 9 and 14 entered the competitions; 20 were stimulated positively, 10 negatively, and 10 were little affected. Over stimulus caused the time to be much slower than when turning alone. "Most frequently this is true of the first trial in competition, but with some it was characteristic of every race. In all, 14 of the 25 races run by the group were equal or slower than the preceding trial alone. This seems to be brought about in large measure by the mental attitude of the subject. An intense desire to win, for instance, often resulting in over-stimulation. . . . A number of young children of from 5-9 years, not included in our group of 40, exhibited the phenomena most strikingly, the rigidity of the arm preventing free movement and in some cases resulting in an almost total inhibition of movement" (46, p. 525).

## IV. Conclusions

The study of animal rivalry seems to force upon us the conclusion that it is a development from the instinct for activity, and also that hunger and the instinct for food are at its very roots. Even solitary animals such as the cat come into the world already armed with instinctive reactions, calculated to worst their companions in the struggle for food. Sex rivalry is connected with nutrition, but has characteristics peculiar to itself, chief of which is its disappearance almost immediately with the sex appetite. Rivalry for leadership is more complex, undoubtedly an outgrowth of the struggle for food and for sex,

[1] Life and Remains, p. 240.

but nevertheless quite independent from either. It is an evolution more directly perhaps from the impulse to pugnacity and is the highest development of this in animal life. The wolf, though it be social, is nevertheless below the dog in social evolution. The former meets his fellow opponent on the field of battle and fights to the death ; the latter, like a modern pugilist, fights until mastery is assured, at which point friendship begins. This together with the natural aid in hunting prey is not without its ethical significance. And yet animal rivalry in its different aspects seems to be a definitely organized response to a situation, not a general reaction. A dog may try to beat another when the dinner bell rings, but in an artificially enforced race the hindermost is as happy as the first.

Human rivalry shows a sequence parallel with the growth and development of the individual. Struggle for food is the initial stage. In early childhood it expresses itself in showing off and opposition, which also testifies to its social character. Pre-adolescence is less self-conscious than earlier and later stages, attention and interest centre more in the external world. It is typified by the child who is always found pushing his way to the front of the crowd. With the period of adolescence comes the growth of intensity, but from the subjective side. Self-examination, incipient at this age, reveals new standards both individual and social; also the auto-emulous impulse is revivified. It is in this period of conflicting impulses that we find those elements arising which make rivalry in its final and highest stage a struggle for superiority, well typified in the American Indian. The Indian has not the ideals of the white man, but the impulse is independent of stages of civilization. The tennis player, who made a 'fluke' because his opponent had done so, in order that he should not win the game on an error, is an illustration of this same finer impulse of superiority.

A study of philology and life conditions supports the theory that rivalry is a social instinct. The number of plays chosen by children increases gradually from the age of six to eighteen, and at the same time there is found an increase in competitive and co-operative elements. Mutual aid is a real and effective element in animal and human life. It is especially so when the natural environment is oppressive. When co-operation is unnecessary to existence, individuality asserts itself. Evidence, however, points to rivalry as a general development of the 'will to be,' from mere instinct for activity through an ever upward push to a 'will to be superior.' Though the superiority desired or aimed at may always be a relative one, there should always be borne in mind the psychological difference between mere 'supremacy' and 'superiority!'

An historical survey of the methods of education seems to reveal a definite sequence in the order of stimulants used to incite industry in learning. The oldest means of persuasion is the rod, as we have seen in Egypt and China. The next higher step is taken when rivalry is in part or in whole substituted for brute force, as is illustrated in old Athenian education, but chiefly by the order of the Jesuits. The final stage is the present, in which many motives are appealed to and rivalry is less a conscious factor but, nevertheless, inherent in the system.

The child prior to six years craves approbation. Badges and visible rewards justly appeal to his interests. The kinds and extent of such stimulation should be determined from the nature of the situation. Undue excitement and perhaps party feeling should be guarded against. But pre-adolescents may well be given more violent stimuli. The organism seems to demand strenuous exercise, and the whole nature is individualistic. Real competition without too prolonged struggle or suspense accords with the nature of the pre-adolescent.

With adolescence the programme changes. The psychic reactions are more complex and new impulses arise. The impulse for superiority and the hunger for greatness may well be taken advantage of by providing material dealing with truly great events and achievements of worthy individuals. Besides opportunity should be given to test abilities in many lines that the youth may the more surely attain success in some one or more.

The Port Royal experiment lends support to a discipline of more competitive nature. Perhaps rivalry is a strong social factor. It need not be antagonistic. The boy desires to get into the crowd, not alone because he is gregarious, but because he is thereby furnished a standard with which to measure his whole self. It is the belief of the writer that the so-called baser emotions, such as anger and hatred, are accessories and means of guidance rather than fundamental motives to action. Artificial rivalry, or rivalry that does not involve the whole interest of the participants, does not pertain to the present pedagogical consideration. Galton writes concerning the lack of moral courage: "The vast majority of persons of our race have a natural tendency to shrink from the reponsibility of standing and acting alone; they exalt the *vox populi* even when they know it to be the utterance of a mob of nobodies, into the *vox Dei*, and they are willing slaves to tradition, authority and custom. "Slavish instincts of man are a direct consequence of his gregarious nature, which in turn is a result of his previous form of civilization. Gregarious animals possess a want of self-reliance in a remarkable degree. We have inherited these

slavish instincts to a remarkable degree, which under our civilization are becoming of more harm than good."

Rivalry reacts against undue gregariousness and is a means of moral and ethical adjustment. It involves all the attributes of courage. It furnishes an outlet for the impulse to physical and mental activity and brings individuals together on the same plane. It fosters that honesty characteristic of the English, who face their rivals healthily and squarely with the hearty admission, "I shall beat you if I can," and discourages that secretive "thrust from behind" attitude characteristic of American "graft" and underhand political play. It tends to inspire self-confidence and to rectify the cowardice underlying gregariousness. Without destroying sociability it tends to place the individual on his own feet.

It appears, then, that rivalry is an elemental impulse of life which cannot be neglected in education. Instead of being looked upon as a means to discipline it should be considered in the light of development and given a chance to expand into its fullest and ripest stage,—the desire for superiority.

Rewards and prizes should be adapted to the period of development. The child cares not for per cents, but loves a badge, and a bit of vanity indulged in early can do no harm, but, on the other hand, will drain off excessive self-pride and make room for greater things. The reward should be adapted to the occasion. Privilege to sit in an honored place is more healthful at all ages than a close contest for marks. The element of self-emulation comes in for a larger share as age advances, and may well be substituted for much of the more strenuous competitions.

The legitimate scope of rivalry is relative also to the occupation and subject of instruction. The special place for rivalry is the field of action. Elsewhere it should always be looked upon with suspicion. Mrs. Boole has made this distinction emphatic in the following passage:

"The element of competition has its place, and a very important one, in education; but its function is to stimulate to active exertion among known facts. Children may legitimately run races for a prize, or compete together as to speed and accuracy in working out sums by methods already quite familiar; but whenever the business on hand is revelation, whether by learning to understand a mental process, observing a natural fact, or tuning the nervous system into harmony with Nature's rhythmic law, the idea and feeling of competition should be entirely absent. Too much stress cannot be laid on this point. The false crossing of influences, the applying of stimulus inappropriate to the particular "function, especially this dragging of the element of competition into the wrong

positions both of the educational life and the professional life, are responsible for more of insanity and vice than any one dreams of who has not given very special attention to the subject." (Preparation of the Child for Science, p. 65.)

The danger to health from the over-stimulation of rivalry has often been noted. It is made emphatic by such cases as the following reported by Dr. Adolf Meyer, a case of insanity which he attributes to over-stimulus. The child was modest, shy, retiring, relied on others. Her sister was aggressive and looked out for herself. At school she studied too hard. "By fifteen she was gravely deteriorated." Dr. Meyer concludes: "Plainly the victim of forced competition with a sister of wholly different endownment." (Psychol. Clinic, June 1908, p. 100.)

The concrete details as regards the proper use of rivalry must be made the subject of extended investigation. No doubt, as has been suggested, a book might be written on the use of rivalry in schools. But at present data are not at hand for satisfactory conclusions or even suggestions. The essential thing now needed for further solution of the problem is a series of experiments by trained psychologists carried on for a number of years, and under controlled conditions. Such experiments should do much toward settling the controverted problem of rivalry *versus* co-operation in the school, and also help to solve the antinomy-individualism *versus* collectivism in social evolution.[1]

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# DRAMATIC INSTINCT—ITS USE AND MISUSE

By Alice Minnie Herts

Those of us who can review a two-score span of life will recall the endless hours when the four bare walls of the schoolroom claimed our bodies, while our souls wandered far afield on adventurous journeys on which it never occurred to us to invite our teachers. They were only make-believe trips after all, and what teacher knows anything about make-believe? Teachers know only about temperate zones and dates of battles and sums in addition and multiplication. Yet on these journeys we were often puzzled and bewildered in the many highways and byways through which we travelled, and at times we might have progressed more surely and expeditiously to the goal of knowledge towards which all such roads lead had some big brother or sister gone ahead with an axe and cut down some of the biggest trees that obstructed our pathway and helped us to pierce the shadows and dancing gleams that make such roads at once a delight and fear. Now and then we could not go along half so quickly as we wanted for fear of slipping off the edges of the big round globe of make-believe which Atlas carries on his back, just like the picture on the cover of our geography books; slipping off into the everyday world again. We were often confused and puzzled because dear dancing roads so often ended "no where" instead of in the gardens their beginnings promised. Once in a while we caught an elusive, passing gleam in the eye of teacher which made us believe that she could help us if we would invite her to come along; but before we ventured, whiff! we were in a different class where teacher's eye gleamed quite a different gleam or never gleamed at all. Little knew she of our truancies from schoolroom in Far Fancy Land. Had we told her of slipping off the Atlas globe she would have forbidden "silly stories."

And now for the child of to-day all this is to be changed. A deep and threatening frown of disapproval of the methods of the immortal Gradgrind is wrinkling the forehead of the advanced educator who righteously disclaims all kinship with past generations of the McChoakumchilds and their out-of-date, injurious tactics. A great and constantly increasing desire exists on the part of those in charge of the education of

the young to give freer exercise to the producing powers of child consciousness through an appeal to the imaginative life. Not alone in select private schools where there is time and means for individual instruction, but in the large, over-crowded classes of the public schools, teachers are encouraged to realize that something more than "facts and facts alone are wanted in life" if the child is to be developed into a useful and happy citizen who shall in good season reap ample harvest for his country's economic advance.

A significant response of the encouraged teacher to the demands of the frowning advanced educator is a plan lately introduced into many public schools of dramatizing or "acting out" the history, geography or reading lesson that the child's co-operation may be attached by something more interesting than a mere recital of dry facts or printed words.

The writer lately visited several public schools both in New York and Brooklyn to study the methods employed in operating this intrinsically excellent plan. She found the children "acting out" the lesson in hand. Braddock's Defeat, the Boston Tea Party, the signing of the Declaration of Independence, and kindred historical incidents shaped into little plays were done by class children with the greatest zest. In one case, class choice of a historical incident for play focussed on the discovery of America by Columbus. One group of girls was chosen by the teacher to portray the Spaniards at court, including King Ferdinand and Queen Isabella. Another group essayed the characters of Columbus and his followers. Historic details of the episode developed in the doing of it; the dialogue, in the children's own words, included mention of the globular theory of the form of the earth, and Columbus's exposition of his belief that by sailing westward he could reach a new continent. The child impersonating Queen Isabella expressed her faith in the navigator and her determination to help the expedition. Then followed suggestion in dialogue and action of the preparation and setting out of the little fleet of three vessels; the attempted mutiny during the persistence of the voyage beyond sight of land; the inducing of the admiral to change the course of the fleet; finally the child impersonating Columbus sighting a light in the distance, and then followed the landing of the imaginary boat. The children acting the exuberant joy of the sailors and the satisfaction of their leader were scarcely more delighted and interested than were those of the class who witnessed the episodes.

For the signing of the Declaration of Independence, a very well dramatized version of the episode had been made in five scenes by the teacher, and simple properties such as flags, rolls

of parchment and newspapers were used by the young players to give more graphic semblance to the effect.

Scene first showed the colonists before Faneuil Hall. Scene second portrayed the calling of the convention. Scene third was placed at the second day of the convention. During this scene an adjournment was taken, when the delegates, represented by various children in the class, discussed amongst themselves the reasons for signing and not signing, and a decision was finally taken to return home. During scene four all the children in the class represented the colonists at their homes reading in the newspapers of what had been done at the congress. Scene five portrayed another meeting of the congress and a submission of the document "The Declaration of Independence;" finally a signing of the declaration by various colonists, the little drama ending with a pledge of allegiance to the American flag.

In all the schoolrooms observed the principle had been grasped by those in authority that the fact acted out is the fact remembered, and that in "acting" the lessons the children unconsciously lent their fullest co-operation with the work of "learning" in hand.

The psychological principle foundational in all such work is potent and apparent and operates much more widely than for the mere attaching of the interest and memory to fact. The operation of the principle involved is controlled by laws at once so fixed and flexible, so limited and so far reaching and so important and vitalizing as applied to school work that the writer is led to deplore the ignorance and meagre intelligence displayed by many teachers now venturing to dramatize lessons.

In every case without exception the children chosen to portray the important characters in the little plays were the ones who displayed the greatest aptitude in acting out the parts, those who were the quickest to give semblance to the character,—in short, the ones whose reproductive imaginations could most quickly bring past periods near, and dead heroes back to life through physical portrayal. The quick, insistent, expressive child who could attain dramatic effect secured to himself the part of Columbus or of Jefferson; the slow, dull, inhibitive boy or girl was either one of the sailors with almost nothing to do, or was not in the little drama at all, except in the capacity of audience. This method naturally produced an effective rendition of the incident for the audience, and proved to be merely the same use of dramatic talent as is resorted to in all schools and colleges in connection with dramatics;—precisely like the Smith College graduate, who displays the greatest aptitude for superficial expression of the part of Hamlet secures for herself the star part; so the child who can best and most

quickly characterize the superficial attributes of Columbus, is permitted to impersonate the explorer for the admiration and approval of all her little friends and classmates.

Concerning college theatricals, we may deplore an opportunity lost to more fully co-ordinate dramatic and educational interests, but when in the schoolroom there is misuse of a vital, educational force to the injury of the child, such violation of the laws relating dramatic instinct to education becomes a matter of urgent protest. A scientific knowledge of those laws are an essential equipment of teachers and others in authority. When the child Columbus in the sixth grade grammar school, like the girl Hamlet in the college play, is permitted to play her part over and over, the ignorance of the teacher works further injury to all concerned. Reiteration may improve by practice the child's performance, but training of dramatic talent is no suitable part of public school work, and the value attaching to that widening of personality which results from the inclusion of another self in enacting a character, is lessened by repetition even when the knowledge and efficiency of the teacher has developed a true contact between the child and the assumed character.

Dramatic instinct is too often confused with dramatic talent, and ignorance of the laws relating both to education and life is almost universal. Dramatic instinct is a significant factor in the life of every individual, connecting and welding the individual with communal life, and the human with the universal. Dramatic talent on the one hand is a special, uncommon gift bestowed upon the limited few. The educator is not concerned to develop dramatic talent in its relation to life and character, because its use is merely to specialize the actor for his business and art of acting. It is a particularized faculty drawn out and stimulated that its output may be effective for an audience and of commercial and artistic value. The teacher of dramatic art is not expected to relate the operation of dramatic instinct to character development of the actor. It is his business merely to push the specialized, imaginative faculty to the most speedy securing of certain desired artistic and commercial effects for the interest of an audience. Dramatic instinct on the other hand is the common, ordinary, free heritage of every child, unconsciously operative in every human being from the cradle to the grave. It is among the great basic forces whereby God shapes humanity; through it is caught indeed a reflection of God in man. It nourishes the root of every other impulse. It is the force which makes the soldier on the battle field grasp his country's flag, and raising it high above his head, cry out, "On to victory," even though that victory includes the death of his own body. It sustains the monk in his

vigils, the statesman in his patriotism, the preacher in his pulpit. Through proper cultivation it may be made a force in education so far reaching, that under its organized impulse the entire character may be developed, mind quickened, sympathies broadened, ambitions ennobled, and bodies lifted and re-made. Reverently, intelligently, lovingly stimulated, dramatic impulse will not alone serve to vitalize facts in the schoolroom; it will also secure responsiveness to the environment which includes the vitalized fact,—the result essential to all true education. The educator is in no way concerned with the result effected in the life of the actor through the stimulation of dramatic talent; he is in every way concerned with the results obtained in the development of the human being through the stimulation of dramatic instinct, and it behooves us all to watch out and guard against the stimulation of this heaven-born impulse by those who have as yet come into no understanding of its powers for woe as well as for weal. In justice to the children it is the educator's business to realize the extent of vital harm which may be effected by teachers through desultory, ignorant incitement of the impulse, as well as the good which is effected by placing the child in conscious communication with its own God-given instinct, to the end of bringing about that which nature has designed should thereby be accomplished.

Five years' experience in developing the Educational Theatre for Children and Young People, still in its swaddling clothes, fills the writer with apprehension at viewing in the schoolroom the stimulation of the child's dramatic instinct by teachers ignorant of the fundamental relations of dramatic instinct to character growth and the principles of its development in this relation.

The object of all dramatized lessons is to create in the unexpressive child through the cultivation of its imagination in relation to the assumed part, a something which did not previously exist for that child. This is the true function of dramatic instinct. Instead of accomplishing this, the unequipped teacher is appealing to the dramatic talent of the naturally expressive child to elaborate a something which already existed. This use of dramatic talent for decorative, finished effects is just as mechanical as the Gradgrind tuition of facts. The ordinary young teacher, with her smattering of Froebel and Pestalozzi, her superficial catchword knowledge of Kant and Bain, and her sole experience of one year's training in a school of methods,—the usual young teacher of the three R's,—must not be permitted carelessly to enter the sanctum sanctorum of the child's imaginative life through the door of dramatic instinct. Far better leave that door closed and guarded

even by a battalion of ultra conservative Gradgrinds, than open it to a regiment of radical insurgents who have not as yet learned to face about and march, far less to carry arms.

Wise, kind, far-sighted Froebel, gifted with the vision of the true educator, realized at once his primary obligation to prepare and develop teachers, who should possess not alone a psychological, but a practical working knowledge of kindergarten principles and methods. Let us be grateful for the conservatism which for so many years kept the kindergarten separate and apart from our public school system, for these were the vital years of sowing, of fertilizing what was so often arid soil. The years of patient ploughing and furrowing that the harvest might be staple and yielding of plenty. In the same careful, intelligent fashion must teachers be prepared before they may be allowed to engage the child's senses as the organs of his mind. They must understand that truth is developed, not taught, and they themselves must learn to bring the child into relation with the essential qualities of things that the child's gift of imagination may leap to a conception of the whole truth before the child can be allowed to stamp a half truth into permanence with action.

Teachers who have had little or no experience in the application of dramatic instinct to characterization and dramatization to character development affirm that in these dramatized lessons the teacher must place no restraint upon the child's normal activity in acting the character according to his own imaginative fancy. That the children should have a good time is considered essential. These are the same teachers who will select for the portrayal of character the child whose natural tendencies, unguided, stimulate it to action, and in both instances they are entirely in error, flagrantly violating a fundamental principle. Here is, perhaps, the most important point at issue, since here we touch upon the development of a sense of truth as essential in inducing the correct conception of the character before conception takes form in action. The dullest and most deficient child, not only may be, but should be carefully and intelligently guided and developed to bring out a new power of consciousness by working out the values of a character; and if he is so encouraged to bring himself by many points of contact into sympathetic knowledge of the character, and after such conception is permitted to enact his evolved creation, he has by so much broadened his soul life and brought himself into conscious kinship with humanity and he will moreover be able forever after to hang a true picture of the character enacted in his mental gallery. This method of dramatizing provides that the child shall realize only a keen interest in what he is doing,—a sense of "having a good time," but always the

teacher must remember that schools are founded and taxes paid for the dissemination of knowledge, and not for the training of dramatic or other special talent, or for the exhibition of personality. The enlightened teacher values the fact as a symbol of truth and as symbols she must deal with facts. She must understand that dramatic instinct is present in and can animate the dullest, slowest child in her care, and she must know how this instinct may be nurtured to that child's quickening. Only in such understanding and knowledge may she be permitted to enter into the child's imaginative life, comrade on his journeys of make-believe; guiding, not coercing; stimulating, not exciting; establishing relations, not specializing personality; in a fashion so wise, so tactful, so loving, yet so scientifically exact that the child is released from all sense of control or restriction.

Methods governing such work have been developed during five years' experience in the Educational Theatre. A work of this kind the writer had the keenest pleasure in seeing in one public school whose principal had come under the influence of Educational Theatre training, and she made certain that the director would have been doing this same good work if cast loose on a barren island without any school curriculum connection.

Dramatic instinct is the educator's concern not only in its relation to the schoolroom and the child, but to life and the period of developing youth. Daily experience in the Educational Theatre develops the fact that the majority of young people as well as children experience a hunger of the soul to live out impulses denied expression in their personal lives.

Individuality is of the soul, and eternal Personality restricts and shapes us into the limits of our environment.

Youth chafes against such limit. The impulses of humanity stir beyond the reach of mere personality, time and circumstance. Johnnie wants to be a pirate, Miss Smith a queen, young Harry a martyr. This is nature's provision against spiritual isolation. This hunger of the soul for experience is as elemental a demand for nourishment as the hunger of the body for food. In dealing with dramatic instinct the educator deals with an expression of this elemental hunger. Unguided, it drives the developing human being into many strange deeds and desires. Not co-ordinated with his life and surroundings it is often dangerous, disintegrating and misunderstood. Guided and directed it is nature's provision for supplying to the soul the experience it craves, but in it the educator is confronted by an elemental impulse of great power and of basic relation to the whole being, and he must be instructed in its guidance.

The quality of the dramatic output of action should be of no concern to the educator. The quality and influence of the impulse leading to action should be his chief concern. Dramatic instinct is to be made a gateway for soul and mind into a larger experience, not a gateway for personality into exhibition. By its use the weakened points of personality should be reinforced, those already robust not exhibited. For this reason the dramatized school lesson must never develop into a finished performance. If it is allowed to become so there will in a few years ensue a righteous revulsion against dramatized school work and all the good which the scientific, intelligent use of the fundamental principle might have effected will be worse than lost, for its ignorant application will just as surely tend to the over-development of emotion, as will its intelligent stimulation nourish and clarify feeling under the direct control of the will. This is constantly exhibited in the classes of the Educational Theatre, where all the so-called bad little girls not at all suited for show work in the schools are led to believe that above all they want to play the nice, good characters in the fairy tales:—dear little Snow-White, kind Red Riding Hood, the lovely sleeping beauty, and the gentle little lady from whose mouth the fairy made fall only pearls and precious stones. The so-called good girls are developed towards a sympathy and understanding of character that interests them to essay the wicked queen who tried so hard to kill poor Snow-White; the horrid wolf or the ungentle maid from whose mouth dropped only toads and lizards. The toughest boys have a right to study and try the part of gentle Cedric Errol in Little Lord Fauntleroy, while the timorous and bashful ones are urged to portray the valiant, heroic virtues of any of the seven little dwarfs in Snow-White; or the pupil is encouraged to select for study a character with which his own makes prompt and easy contact, not that he may the more effectively do the acting of the part, but that he may thus come into a power of analysis, a judgment of his own qualities and experience in the safe restrictions of the assumed character, the dangers and results of violence or weakness that are part of his own personality.

Educational Theatre methods of applying dramatic instinct to character development have come about through the experience and observation of five years. They constantly show that the child whose craving dramatic instinct is capable of crime is the one whose same instinct may be equally capable of heroism, and in nine cases out of ten all the child desires is the opportunity to "act out" an impulse. Give the boy of fifteen his chance to play a thief or a murderer on a real stage, in the costume and environment of the part, he will experience

all he wants of stealing and killing. It may be highly dramatic to be one of the street gang, and it sets you up in the eyes of the other fellows, but it is just as picturesque if you can do it on the stage, and besides you have a better audience. Here is where the Educational Theatre gets hold of the child that no formal method of education has been able to reach because no formal method is so powerful and so sure because so attractive, so stimulating, so interesting to the child himself. What good to preach of the beauty of truth and valor and courage, to barefoot, out-at-elbow Tommy O'Sullivan, whose drunken father shied a dinner plate at his head last night. Tommy might stray into a church or Sunday school to get out of the cold, but Tommy really wants to be Prince Edward when he comes to the Educational Theatre. He has paid his dime to come into the theatre dozens of times during the past five years and he has seen Jakie Kaminsky play the part. He wants the chance to get into those beautiful white satin clothes with the golden belt and the dangling sword and the feather in the cap. He knows that in this theatre he has the right to play, and other fellows and girls will pay to see him, just like he has put up his dime to see Jake and Jim. He councils himself he could hardly believe that that fellow on the stage was really Jake. He looked so different and he seemed so different when he was shooting craps on the corner last winter. Tommy cannot fathom the mystery of the transformation, for he only heard Jakie say that he has been having the best time of his life playing at Prince Edward in the Prince and the Pauper. Tommy's desire to enact Prince Edward is so strong that it brings him to classroom and rehearsal work for three whole months, and when he finally does qualify in the part he gives us quite a different young prince from the one Jakie gave, and his impersonation is especially interesting for that reason. We see how it grows to be far better fun for Tommy to hurl make-believe golden coins into the midst of an admiring multitude of sixteenth century street gamin, all of whom, by the way, are his own intimate companions, than to shoot craps with the very same fellows on East Broadway. Perish the awful pedagogical thought in Tommy's mind that he was learning anything, even sharpening his perception to the point of recognizing the fashion of clothes in vogue at the court of good Queen Bess, and yet when it fell to Jakie's lot one day to help a new Lord Seymour to get ready to play, that is what happened.

Every part in every play at the Educational Theatre being taken by a different person at each performance, costumes are made of a middling stock size, and then ensues simple trust in the ascendancy of a prevailing lucky star that neither Gullivers nor Tom Thumbs may qualify for parts. However, if a Gulli-

ver does qualify, he gets his chance to play, and on this day, made memorable by the perspicacity of Jakie, a fellow much larger than any one who had as yet played the part was ready to play Lord Seymour. Try as he might there was no hope of the big fellow getting into the middle-sized jerkin and puffed trousers. The tights alone were serviceable, but obviously insufficient. Almost in despair the thought came to the writer to utilize an especially large costume which had been made for the prince in the production of Snow-White, which dramatization of the fairy tale had been costumed in the period of Louis XIV. The Prince's costume being produced, Jakie started to help Lord Seymour in dressing, but before Seymour had donned the coat of the Prince of Goldland, Jakie protested sharply, "We can't let him go on in that costume; it ain't the period, and all the people in the audience will know it. We've got to do something else. Suppose we get Hertford to change clothes with Seymour, because Hertford's coat is long and has no sleeves, so it will go on any one." This proved to be exactly the correct solution, and our boy's developed perception and resourcefulness saved a historic period, as well as the feelings of a discriminative audience.

Has the reader any notion that this general development of the human being was accomplished by merely encouraging Tommy to follow his own sweet will when he became fired with a desire to enact Prince Edward, and letting him have a good time? It took all of three months of careful, patient, loving endeavor to bring the soul of our boy of an east side tenement into points of contact with the soul and spirit of the little prince of the middle sixteenth century, and from these points of contact to stimulate him into action. The task was lightened for the teacher because, after all, Tommy had elected to do his own work, as every one must in the Educational Theatre. Not for an instant, heaven forefend, because of any desire to know about the history, the customs, or the manners of Merrie England in Elizabethan times, or to develop his own sense of kinship with gentleness and honor, but merely because Tommy wanted to play the part of Edward. He wanted to show his father and mother and all his friends his idea of Edward, he wanted to be Edward, and he loved his self-appointed task well enough to be willing to work in preparation until his Prince Edward was true not only to his, Tommy's ideal, but true also to the real young prince. There is the educator's point, the contact between Tommy and the prince. The boy had been willing to pursue his own ideals sufficiently far to carry them to objective issue. He had stuck to the hard, laborious part of his work until he had been able to do it well enough to offer to a large audience who were willing to pay to see it, and

yet our Tommy had not the slightest spark of dramatic talent and would never have been chosen in any public school to enact any important character even in a history lesson.

What has the playing of the character of Edward done for our Tommy besides affording him some months of great happiness? It has recovered and strengthened his own will power through the stimulus of Edward's will. Tommy has lost and so found himself in the joy and sorrow of the young English prince. The proper direction and control of Tommy O'Sullivan's dramatic impulse has brought him into such intimate association with young Edward, Prince of Wales, that the thrill of Edward's valor will forever afterwards be unconsciously a part of Tommy, for something struggling in his starved soul has demanded and received expression. In the last act of the drama when the young prince, in the rags of Tom Canty, the pauper, makes sturdy claim to his righteous throne, it is good to see the Bowery stripling raise his hand with conscious dignity, and when Lord Seymour with selfish motive would oppose him, cry out, "Hold, Lord Seymour, and stand not in the way when God brings right." Through the conscious imagery of another soul our boy has secured a new spiritual asset. That great lesson once learned, he has not further need of Edward, so he goes on to widen his circle of friends, to broaden his sympathies, to steady and control his emotions by their exercise in feeling points of contact with other lives. Born and bred on the Bowery, sleeping many a night in ten-cent lodging houses and picking his companions on the street, it is not likely that Tommy will ever be on intimate terms with an English Earl, but if it ever happens that he does meet an English gentleman, his stage connection with the life of Cedric Errol will make him very speedily recognize the difference between an English gentleman and a bounder, or for that matter the distinction between an American gentleman and a snob. Tommy himself, in company with his friends and intimates, is not at all troubled with the notion that he has histrionic talent. He knows mighty well that any of the fellows on the Bowery could do the same thing in this theatre if they wanted to give the time to it. Sophisticated audiences who, unlike Tommy, do not recognize the difference between dramatic instinct and dramatic talent declare that Tommy is a wonder. It is no use, you cannot deny it, Tommy is gifted. In truth they are a trifle disconcerted when they visit the theatre the following week and see the same character equally well enacted by Jakie; but never mind, their theory is correct. Jakie is also gifted and the writer entirely acquiesces, for in both conclusions they are probably correct. Tommy and Jakie in common with all the world are gifted with dramatic instinct.

Every Tommy and Jakie and Mamie and Maggie, as well as every Alphonso and Eustace and every Marjorie and Madeleine, money rich and money poor alike, every child born into our Lord's good world is gifted and endowed with the great heritage of imagination, the web and woof of which is woven of dramatic instinct.

> "Not in entire forgetfulness,
> And not in utter nakedness,
> But trailing clouds of glory do we come
> From God who is our home."

Let us then not close the shades of the prison house upon the growing soul, but let us wait with bared heads before the trailing curtain of the child's soul and equip ourselves with ripened wisdom before we dare venture incautiously and irreverently to raise that curtain merely to satisfy the curiosity of an audience of onlookers. Let us realize that the trained imagination may be the most potent factor for good in life, whose development should not be lightly or ignorantly undertaken. Properly guided, it will give to this world of ours not alone its best poets, painters, architects, musicians and inventors, but even from a utilitarian standpoint, its greatest financiers and its most successful merchants, and equally important to the educator its Tommys, Jakies, Mamies and Kates fully developed into rounded selves, alertly responsive to their environment and in ready sympathy with humanity, all-around human beings, kin and comrade to the best with a brother's hand and understanding of the worst. The development of expression through the right service of dramatic instinct will no more specialize the actor than will the tuition of drawing specialize the artist or of music the musician. What such tuition will serve to stimulate is discrimination, a quick eye and hand and heart with added taste for the beautiful, while development in responsiveness to the best and noblest people and things of all the ages will create taste and discrimination in the choice of individual surroundings, deeds, actions and ambitions.

And here again a word of sincere caution that none may be in error concerning the grave evils which are certain to result from the misuse of the power of dramatic instinct in our children, and of the great and far reaching benefits which are sure to follow in the wake of its right and intelligent application. Its misuse will promote self-consciousness, vanity, egoism and superficiality; its true use will insure a lack of self-consciousness, righteous self-esteem, altruism and profundity; its misuse will shut in the darkening walls of personality; its real use will open wide the sunny windows of humanity. Its misapplication for the pleasure of an audience will make our children

hysterical, emotional and ill balanced; its proper application to their lives and character will produce in them a calm, well balanced judgment deep sympathies and a unique power of self-control. The ill use of dramatic instinct reaches the mind through the physical organs, a process working from the outside in; its true use reaches the mind and soul, whence are issued commands to the organs of the body, a process working from the inside out. The true cultivation of dramatic instinct is verily a teaching by the spirit, and the spirit alone can teach.

## TENTH ANNIVERSARY OF THE HALL CLUB
## OCTOBER 23, 1908

Ten years ago, a club of young mothers living in the vicinity of Clark University, Worcester, Massachusetts, was organized for the study not only of children, but of other topics that mothers wanted and needed to know. Its membership was limited and, although the limit has been raised, there has always been a waiting list. While other clubs for more or less similar purposes in the vicinity have died, it has flourished; and, at its Tenth Anniversary, a record of its achievements was presented at a banquet, and has been furnished to the editors of this journal, through the kindness of its officers and speakers, for publication. It has not attempted great things, but has been on the whole so interesting and so successful that it has believed that its achievements will be of interest in many other centres, especially since every year many letters are received inquiring how to conduct successful organizations of this kind. A copy of these proceedings sent to enquirers will henceforth be our answer to such letters. The ménu was an excellent one; the decorations were in red; the fathers and a few friends were invited; and, after the banquet, the following addresses made the occasion memorable to all who were present.

The first address was by the President, Mrs. Rufus C. Bentley, and took the form of words of welcome to the guests.

Mrs. Bentley spoke as follows:

Some years ago, when I was a student of the theories of Child Study, the person to whom we looked for inspiration and for authoritative advice was the man whom we have the pleasure to welcome here this evening as our guest of honor. It was in Lincoln, in 1893, when the state educational associations of Iowa, Nebraska, and Colorado, combined to bring him so far from home, that I first had the privilege of listening to Dr. Hall. I remember especially his evening address on the education of the heart, and even now, I could quote certain passages and phrases from it, so deep was the impression made upon me.

My next opportunity was in 1898, in California, when the state educational association met in Santa Rosa, and Dr. Hall was on the programme. I might almost have said he was the programme; for in their interest and delight at having such a man with them, the programme committee overworked their

speaker from the far east, most outrageously. How we listened until the last word was spoken, and then, paying scant heed to the minor prophets, hurried away to the next section that claimed him; for the meeting was a large one, and all the divisions, round tables, councils, and what not, must have a special address, and none of them, from the kindergartners to those struggling with the college curriculum, were disappointed. Later, it was the name and reputation of Dr. Hall that brought us to Worcester.

Pardon these reminiscences, but perhaps now you will understand the peculiar pleasure and satisfaction it gives me to welcome, as our guest of honor, President Hall, of Clark University. Dr. Hall, we are very happy to have you and Mrs. Hall with us to-night, and as the high aims that animate your work have been our inspiration, we hope that we may keep to such a plane that you will never be sorry that you became the god-father of the Hall Club.

And to you, the fathers of the Hall Club, we would extend a most hearty welcome. Upon occasion, you have been dined and toasted for various reasons, but to-night it is as fathers that we greet you. It is a matter of history how the American girl burst upon the astonished gaze of Europe and held the admiring approval of those who assisted in her triumphal progress. It is only recently that the foreign visitors discovered the American man. This retiring person, who was content to stay at home and provide the funds for the brilliant advance of the American matron and her daughters, by sheer weight of native worth and ability has at length challenged the admiration of the world. In the fields of enterprise, in inventions, in discoveries, in explorations, and in finance, he has few rivals. Some critics claim that he lacks imagination and poetic insight (which we would deny); they say that the American man does not often spend his evenings reading poetry to his wife and children. But as a husband and father, the American man is unique. The only criticism offered is that he is too kind, too lavish, and too indulgent to those given to his care. I am sure that these are faults which we, as wives and mothers, are very ready to forgive.

To me there is something inexpressibly beautiful about the love a father has for his children. A mother must love her babies; the physical tie is so close, the association is necessarily so intimate, the daily and hourly care is of such a nature, that a mother might as well deny her own personality as to fail to love her child. But nature has laid none of these bonds upon the fathers; and yet how strong is their devotion, how deep their self-denial, how constant their struggle to provide for their children! We realize that it is this love of yours that

raises a wall around us and our homes, and makes our work possible.

We have welcomed you on other occasions. Father's night has become a function that we could not spare from our calendar. But we wanted you to sit at our table and to eat with us. Pray do not imagine that the common saying that places a prosaic organ very close to a man's heart had any influence with us in choosing a dinner as the form that our entertainment should take. I do not know why there should be something so deeply symbolic about such commonplace and necessary acts as eating and drinking. Perhaps it is because it goes below and beyond our human lives, and carries us back to the dim ages when,—to quote Dr. Hall—the awful mandate, "Eat or be eaten" held sway. Certain it is that there has always been something almost sacred about formally eating together. Compacts have been sealed in this way, and there are few races who do not feel a peculiar tie and obligation to those with whom they have broken bread and eaten salt. Nearly all religions celebrate their most solemn mysteries by eating and drinking. And so we feel that by this dinner we have celebrated our anniversary, and taken you into our fellowship as we could have done in no other way. We welcome you to our table; we sit around a common hearthstone; you honor us by accepting our hospitality. We give you our most hearty greeting, and welcome you most cordially.

You all know the occasion that calls us together. This celebrating of anniversaries is a custom too old and too universal for me to attempt to unearth its origin and progress. I leave that to those so well fitted to work out such problems.

When we meet to celebrate an anniversary, what a pleasure to have with us the people most intimately concerned. It is one of the penalties of an old organization that it can send no pioneer representatives to its celebrations, to keep the facts straight and the traditions accurate. On the other hand, it is one of the privileges of a young organization to be able to lift the veil that hides its origin, and to speak with personal authority on its founding and its history. I feel that we are especially happy to-night in our toastmistress. A woman who might have been chosen for any one of a half dozen reasons; and as well, a charter member, and president of the Hall Club during the first two years of its career. I take great pleasure in presenting to you Mrs. Orr, the toastmistress for the evening.

Mrs. Orr, the toastmistress of the evening, was greeted with applause, and spoke as follows:

*Madame President, Members of the Hall Club and Guests:*

The distinction of having been the first president of the Hall Club is

surely an honor, but I can assure you that the duties were undertaken with fear and trembling, and that the fear and trembling is still going on.

To-day we celebrate our tenth anniversary and we are proud and happy to welcome you all, although it is difficult to realize that we have been banded together so many years.

When four of us met one afternoon to hear what was being done by two other Mothers' Clubs, we little thought that we should grow to such a large club, in fact, have a waiting list; but, our founder, Mrs. Joseph Knight Greene, must have selected good material with which to build.

"Nothing great was ever achieved without enthusiasm," and enthusiasm has never been lacking in the Club in its work, whether it was psychology, nature study, chemistry of foods, or art.

If one were to find a wonderful gem, a beautiful picture in a rare book, he would immediately become interested to know something about it. Although you have all doubtless heard of the Hall Club, still you will perhaps be greater by hearing about its work.

One of our charter members has consented to tell you about it, and I now have the pleasure of presenting Mrs. William Clement Marble, who will give you a short history of the Hall Club.

### History of Hall Child Study Club

*Madam Toastmistress, Members of the Hall Club and Guests:*

Your chairman of the committee on arrangements for this occasion was artful as well as wise in her manner of letting us to do our little part for this evening. She first obtained our consent to speak by tactfully smoothing us the right way, so to speak; and then announced the fact who the principal speaker was to be. I, for one, began to feel myself shrinking until, like the little boy's shadow—"There might have been none of me at all." It was only by remembering that we cannot all be the same, and that great people are also considerate of the lesser ones, that gave me courage to give to you in part the history of the Hall Child Study Club.

"Every thought and every deed,
May hold within itself the seed;
Of future good and future need."

So in the mind of one of our members there one day arose a thought that the mothers banded together might accomplish much for their children, by exchange of thought as well as of experience; and being a woman of action as well as of thought, she looked about her for mothers who would make a congenial circle. Mrs. Joseph K. Greene's efforts were rewarded by four mothers gathering at the home of Mrs. Samuel H. Colton for a preliminary meeting on October 23, 1898. The four mothers who were present at this time were Mrs. Merrill D. Brigham, Mrs. Samuel H. Colton, Mrs. Joseph K. Greene, and Mrs. John H. Orr. The first regular meeting was held at the home of Mrs. John H. Orr Mrs. Herbert W. Chamberlain, Mrs. Linwood Robinson, Mrs. Charles F. Stevens, and Mrs. William C. Marble with the four members previously mentioned, being present.

That day will always stand out clearly in the minds of all who were there. We realized the importance of the undertaking and were as dignified as young mothers could be, considering that we were almost afraid of each other.

The club though small seemed vigorous from the start and was fortunate in its selection of officers for the first year:—Mrs. Orr, President; Mrs. Greene, Vice-President; and Mrs. Irving, Secretary. We

were temporarily called—"The Woman's Child Study Circle, No. 2." Not caring to be known as "the second," we then considered the subject of a suitable name. Our officers displayed great energy and courage in always aiming for the best, and I feel sure I voice the sentiments of our leader in saying she was the happiest woman in Worcester, when she was able to say to the Circle, that the greatest man we have would allow his name to stand for our little band of mothers; so we became known as the Hall Child Study Club; and with Dr. Hall for us, who could be against us.

During the first years each member bought and circulated a book on child study and at the end of the year received it again. Later we bought books on household economics and nature, according as we studied these topics. The club subscribed for and circulated among its members the following magazines:—"Trained Motherhood," "Babyhood," "North Western Monthly," "New Crusade." After the members had read these magazines they were used by settlement workers. Meetings were held on first and third Wednesdays of each month. The first year was devoted to the study of the following subjects:—

List of Subjects for—

1898-1899

"Let us live with our children" Froebel. (Motto on first calendar)
Childhood Fears
Literature for Children
Birthdays and Holidays
Discipline
The Story of Life
Heredity and Environment
Sociability of Children and Playmates
Children's Imagination and Lies
Love of Nature, Pets and Plants
Mine and Thine
Hygiene in the Home
Accidents and Emergencies
Children's Manners
Children's Troubles
Nutrition
A Child's Religious Ideas and Training

During the first year Dr. G. Stanley Hall entertained the club at his home and also lectured to them on "The Evolution of the Soul." Some of the ideas we heard at that time still stand out very clearly in the minds of those who were privileged to be present and hear Dr. Hall speak. Many have been the courtesies extended to us by the people of Clark University and people of note in Worcester. Dr. Hall opened his own library to the club for a stated time, and all appreciated what that meant to one who loves books. And here I would say that Mr. Wilson, of the University Library, was very painstaking in getting us books and cheerfully giving us all sorts of information and suggestions to start us right. Mr. Goddard, of Clark University, spoke to us on "The Suggestibility of Children," a paper rich in ideas for parents. The club was also addressed by Mr. George Partridge, on "Excitement and Fatigue." Dr. Jennie Miner, on "Parental Life." The talk Dr. Hodge gave to the club on "Birds" has resulted in untold pleasure for all our families in the interest which observing and caring for them has brought out while trying to attract song birds to our homes. Dr. Sanford also addressed the club. And with a picnic at Mrs. Stevens's, we ended our first year's work.

The second year we took up the study of the following subjects:

PROGRAMME 1899-1900

Training of the Will
Relation of Parents to School and Teachers
A Study of Temperaments
Mothers' Rights
Poetry
The Bedtime Hour
Amusements
Periods of Growth
Physical and Moral Training
Sunday with our Children
Temperance in All Things
Children as Educators in the Home
A Child's Development through Responsibility
Studies of the Childhood of Great Men

Dr. Barton spoke to the club on "Nervousness," Dr. Chamberlain spoke on "The Savage and Civilized Child"; Mrs. Orr read an article by Dr. Hall on "Kindergartens"; Miss W. Gordon and Miss C. B. Rood illustrated "Finger Plays;" Mr. Norman Triplett spoke on "The Fooling Instinct of Children"; Mrs. G. Stanley Hall spoke to the club telling of work accomplished by a Boston Mothers' Club, at a tea given by Mrs. Stevens in honor of Mrs. Hall who was unanimously elected an honorary member of the club; Mr. Willard S. Small spoke on "Unselfishness of Children"; Dr. Willard Scott gave a sketch of the life and character of Rousseau; Dr. Rockwell addressed the club on "Value of Foods", on Fathers' Night. During this second year we extended our membership to 25. The meetings were not only pleasant gatherings, but also, most profitable opportunities for study. We have striven to be in harmony with the law of unity and so have made some strides in growth. About this time nature was talked of a great deal in schools, and children asked many questions at home. Mothers then found that in order to give intelligent answers, we must of necessity turn students ourselves on the subject of Nature. Dr. Hodge spoke at Clark University on "Nature", the "Mothers in Council", of Springfield, also being present.

The following list of subjects was studied during the year 1900-1901:

Autumn Seeds, Nuts and Fruits
Forestry. Nest Census
The Aquarium. Animal Pets
Winter Birds and Their Care
Birds' Nests and Their Construction
English Sparrows. Bird Calendar
A Child's Interest in Animals and its Expression
Dr. W. H. Burnham
Spring Birds and Their Migration
Work of Birds in Insect Destruction
Insects of Gardens and Lawn
Early Spring Flowers
Flower Catalogue and Home Decoration
Insects and Toads
Bees. Cross Pollination Dr. C. F. Hodge
Summary. Nature Study

1901-1902

Butterflies
Fall Flowers
Butterflies Miss Dolbear

Ferns
Cocoons
Stones
Insects; helpful and injurious
House-Carriers Under Water (Caddis flies)
The Flora of Worcester — Mr. Joseph Jackson
Spring Peepers
Spring Flowers
Identification of our Common Birds, Their Notes and Markings — Mr. C. F. Hodge
A Woodland Ramble
Trees
Mushrooms — Dr. G. E. Francis

1902-1903

This year Dietetics and Household Economics were studied at Oread Institute as bearing directly on the welfare of the families.

Food as Applied to Nature — Mrs. Flora Wethered
The Body's Requirements and its Dynamic Forces — Mrs. Flora Wethered
Foods, Their Chemical Constituents and Physiological Effects — Mrs. Flora Wethered
Dietary Standards and Their Practical Value — Miss Clark
Cereals and Vegetables and Their Importance as Food — Miss Clark
Cheese and Eggs, and the Value of Condiments — Miss Clark
The Art of Cookery as Shown in Preparation of Salads and Desserts — Miss Clark
Fish as Food
Needs of School Children
Tuberculosis — Dr. Edith Clark
Food for School Children — Dr. Sanford Bell
Modern Dietary — Mrs. Ellen Richards

1903-1904

My Dietary for a Week
An Ideal Dietary for Three Weeks
Second Dentition
Educational Significance of Children's Games
Physical Changes at Adolescence — Dean Bentley
Parents' Opportunities for Moral Education — Dr. Theodate L. Smith
Labor Saving Devices in the Homes
Sports and Athletics for Adolescents — Miss Healey, Gymnasium instructor
Lying Propensity in Children — Mr. E. H. Russell
Food for Adolescents
Our Children's Collections
Children's Home Tasks
Summary of the Year's Work — Dr. W. Fowler Bucke

HALL CLUB PICNIC

This has been a review of the last three years' work. We found it profitable to study a combination of Nature, Foods, and the Adolescent Period.

1904-1905

The Woman Errant — Book Review
Outing to Sterling
Duties of Parents to Public Schools — Dr. A. S. Garver

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|---|---|
| The Preparatory Schools | |
| Medical Inspection in Schools | |
| School Hygiene | Dr. Burnham |
| The Private School | Dr. Abercrombie |
| Resident and Non-Resident Help | |
| Uses of Cold Storage | |
| The Preserving of Foods | |
| Cost of Living | Mrs. Ellen Richards |
| Alternation of Generations in Plants | |
| Mosses and Liverworts | |
| Ferns | |
| Florida Stereopticon Lecture | |
| Visit to Simmons College | |

1905-1906

| | |
|---|---|
| Some Emergencies and How to Meet Them | Dr. Edith Clark |
| Florence Nightingale | |
| The Woman in Germany | |
| Indian Arts and Industries | |
| Child Labor in the Past | Miss Porter |
| Home Life in the Olden Time | Miss Frances Morse |
| Household Economics | Miss Burrington |
| Stereopticon Lecture on Ants | Mr. J. P. Porter |
| Letters from Alaska | |
| Romance of Alaska | |
| Greece | Mrs. Sheldon |
| Fairy Stories | Mrs. C. F. Hodge |
| Adolescence (Father's Night) | Dr. G. Stanley Hall |
| The Madonnas | |
| Music in the Home | |
| Birds | Miss Ball |
| A Musical Programme | Mr. Chauncy Lyford |
| Bees | |
| Spring Flowers | Miss Anna Schryver |
| June Picnic | |

1906-1907

The programme committee gave us some of the ideal as well as the practical this year. Even the cover has been the most appropriate one we have ever had and will be treasured by us all.

THE WORLD BEAUTIFUL

| | |
|---|---|
| England | Mr. C. J. Dyer |
| Germany | Mrs. Hodge |
| Russia | Dr. Blakeslee |
| Japan | |
| Holland | |
| America | |

THE HOUSE BEAUTIFUL

| | |
|---|---|
| William Morris | |
| The Drawing Room | Mrs. G. Stanley Hall |
| The Dining Room | |
| The Library | |
| The Nursery (An Ideal Nursery being exhibited) | |
| History of the Church | Dr. Blakeslee |
| The Reformation | Mrs. Alexander Chamberlain |
| The Higher Criticism | |
| Allowances | |

Obedience
Athletics
How to Live Nearer to Nature in our Homes
Miss Anna Schryver
Annual Picnic Red Farm

PROGRAMME 1907-1908.

How to Promote a Taste for Art in Children
Spain
Paris
Rome Dr. Austin S. Garver
Venice
Northern Italy
Albrecht Dürer and His Contemporaries Dr. Samuel P. Capen
Munich
Dresden

FATHER'S NIGHT

The Value of Art in Teaching Children Dr. G. Stanley Hall
The Netherlands
England Mrs. Helen D. Burgess
America
Masterpieces in Literature for Children Mrs. C. F. Marble
Boston Public Library and Fenway Court
Annual Meeting
How Insects Fertilize Orchids Mrs. Edmund C. Sanford
Picnic

Our records show that we have taken up Child Study, Nature Work, Household Economics, Adolescent Period, and Art. We would resent the thought that we have left the subject of Child Study and gone to other fields of study to the exclusion of the child. For when the mother was interested in nature the children learned of her. So it was when we have studied art, the children have had the seed of fine art sown in their fertile brains. So whatever we have taken up has been with the idea of benefiting the children.

This club has not drawn the mother from her home duties, but rather it has tried to point out how exalted and important her home life should be. It is of interest to note that during these ten years there have been twenty-two new babies in our club, and the Children representing the Hall Club at present number eighty-seven, and in looking over the list of fifty-two mothers who have been members, their children swell the number to one hundred and thirty-three children.

Each mother, as she looks at her little one feels like saying with Heine—"Du bist wie eine Blume, so schön, und hold, und rein" and that they may always remain so is the earnest wish we breathe for them all.

In the early years the club formed a custom of presenting a silver spoon to every new baby that came to us. I am sure that each proud possessor of a Hall Club spoon, will, as years go on, value it as one of their choice possessions.

While looking over the records preparing for this paper the writer has had a taste of how very delightful memories can be when they are pleasant. Time will not permit me to dwell on the splendid work accomplished by individual members or of their abundant hospitality. This club has brought out qualities in the mothers they otherwise never have used or even dreamed they possessed.

I cannot pass without referring to the papers that Mrs. Lyford and her gifted family have given to the club, they have all been very profitable. Many of us being benefited by their suggestions.

The afternoon on Greece was interesting as well as instructive; after the paper, there were Greek refreshments served by a Greek matron, assisted by six Greek maidens.

The afternoon with fairy stories will long be remembered, one little fairy has whispered that I must not omit mentioning what great fun it was for fairies and brownies to bring the Giant from his den.

We have also had the honor of listening to Mrs. G. Stanley Hall, and all shall remember the delightful day at Simmons College. Other speakers have been President Carroll D. Wright, Mr. Beals, and many others. Father's night will always linger pleasantly in our minds for then we have had of Dr. Hall his best. A special treat was in the opportunity to meet Judge Lindsey, who was Dr. Hall's guest and who spoke in a personal way about his work in Denver. The list would not be complete without reminding you of our fine times with outings and picnics at Sterling, Happy Hollow, and Red Farm. Our annual picnic with Mr. and Mrs. Colton, at their summer home, is looked forward to and long remembered by all the families as a red letter day in our calendar.

No doubt you will notice omissions on my part that you will think ought to have been referred to, but if I told of all the good times we have enjoyed, there would not be time for any one else.

It is with great sorrow that we record the loss of our beloved and highly esteemed member—Mrs. Myron W. Stickney. In her, the club has lost an ideal member.

They say young organizations make much of a tenth anniversary, perhaps it may add to this occasion if we remember that this is the 165th meeting of the Hall Club. I would not leave the impression that all we have attempted has been a shining success; very often the best sounding theories when tried at home were impossible for our children. It was only by a careful blending of some theories with our everyday routine that at times made a happy combination. Our usefulness cannot be measured by these words. It is when we hear of women standing high in educational circles say that they are desirous of being one of us, that we feel all we have ventured has not been in vain and for the next ten years we hope the club may continue to gain in knowledge and experience as it has in the past.

If we have achieved anything worth while it is because we have all had as our inspiration *the name we stand for.*

Mrs. Marble's paper was greeted with applause.

The toastmistress then said:

Having heard about the Club, what is more fitting than that you should be told a bit about our beautiful city, with its many hills and fertile valleys?

We have one present who is splendidly fitted to give much information, one who has filled the highest office which our city can bestow upon a citizen, one who has "dwelt in marble halls."

I now have the honor of presenting the Honorable Walter H. Blodget, who will respond to the toast, Worcester, the Home of the Hall Club.

Ex-mayor Blodget here made a few interesting but informal remarks.

The toastmistress then said:

Once or twice a year it has been our privilege to hold meetings in the evening and invite the fathers.

At first we fancied that you came somewhat reluctantly, but now we know you anticipate the events from season to season.

Surely guests were never more welcome at any function than you are to-night.

It is with pleasure that I now introduce Mrs. Clifton H. Mix, who will respond to the toast, Our Guests—The Fathers.

### Our Guests, the Fathers

By Mrs. Clifton H. Mix

I

The toast to which we now have come
Should lend a tongue e'en to the dumb,
For of our cake it is the plum—
The Fathers.

II

So, if my Pegasus is lame,
And these poor lines seem somewhat tame,
'T is not the theme that is to blame,
O Fathers!

III

When first the budding sprout grew Greene,
Whose ten years' fruitage now is seen,
I fear 't was held in light esteem
By the Fathers.

IV

They seemed to think it all a joke,
And often our words would a smile provoke,
When of our *serious* aims we spoke
To the Fathers.

V

But all remarks we patiently bore,
And to reply we meekly forbore,
Because we have such reverence for
The Fathers.

VI

Then too we remembered the marvellous brain
Which surely must bring our children to fame,
And also the source from which it came—
The Fathers.

VII

So, ceasing at once to plead our cause
We determined to strive without a pause
And by merit alone to win applause
From the Fathers.

VIII

We studied nature; we studied art;
We studied the home in its every part
Clear down to the kitchen, dear to the heart
Of the Fathers.

IX

We studied problems of every kind;
We studied the laws that govern the mind;
We studied everything we could find—
Even the Fathers.

X

We studied long, we studied well,
Whatever worth while in our pathway fell;
Though *all* we learned, we omitted to tell
The Fathers

XI

As time went on, signs not a few
Showed plainly to us that their interest grew,
Until we discovered an attitude new
In the Fathers.

XII

'T was then they hailed with great delight
An institution called Fathers' Night;
Those rare occasions when we invite
The Fathers.

XIII

Though you may sometimes have been in doubt
As to what this Hall Club was all about,
We have never been willing to do without
The Fathers.

XIV

Ten years of work, ten years of play
Have brought us to this anniversary day.
And we owe much we can never repay
To the Fathers.

XV

Through the smiles and tears that come with the years
Often in joy and sometimes with fears,
The comrades whose presence our pathway cheers
Are the Fathers.

XVI

So now with me your glasses fill
And drink this toast with a right good will,
For with all their faults we love them still,—
The Fathers.

This poem was received with great applause.

The toastmistress then said:

Our season's work over, we could truly say with the poet,

"Snatch gaily the joys which the moment shall bring,
And every care and perplexity fling,"

and have an outing.

When a certain gentleman was requested to respond to the toast, Club Outings, he replied that he had attended only one. However, knowing of his wonderful power of observation, we felt that he was

especially qualified to speak on the subject, and it is with pleasure that I present to you Mr. Joseph Knight Greene, husband of our founder, who will respond to the toast Club Outings.

*Madam Toastmistress, Ladies and Gentlemen:*

When the toastmistress invited me to speak at this banquet she promised me that I might select my own subject. I am not the first man to be deceived by some woman in the belief that he could select his subject. Every woman can make any man believe he is selecting a subject, but after some ceremony has made his selection irrevocable he finds that she has selected him for her subject and he has selected her for his ruling sovereign.

I spent much time in finding a subject which should measure up to the occasion and in laying out a line of thought appropriate to the subject, hoping in the intervening time to find language in which to clothe my line of thought. I rather planned to comment philosophically upon the evolution of the work of the club from the child study of early years to the broad culture in art and literature of the present, with possibly the future solution of the, as yet, unsolved problems of the universe, winding up in a burst of genuine eloquence in which I would pay a magnificent tribute to the personnel of the Hall Club. I came down to my office the next morning with my temperature several degrees above normal from the warmth of my enthusiasm only to be informed by telephone that my subject would be "Hall Club Picnics."

I note that the other speakers have been assigned subjects with which they are thoroughly acquainted. Any one of them could write volumes upon the assigned subject without going beyond the precincts of personal experience and acquired knowledge, while I have been to but one, or at most but one and a half, of the club outings. I did attend one club picnic and I had a most excellent time. I had one experience that day which I never intend to forget. In the morning the boys played a game of base ball and with the rashness of youth I accepted the position of catcher. We had played but two or three innings when I misjudged one of the new-fangled curves and caught the ball on my wrist. There speedily developed a bunch of such proportions that if one of the scientific observers of Clark University had seen it, and not known the cause, he would have accepted it as irrefutable evidence that man was descended from some form of animal with knee-caps both fore and aft.

Although as I remember there were some seven doctors lying around on the grass watching for an accident, I employed none of them, as I did not care for a case of permanent disability, but went up to the house where the fairest and most charming member of the Club bound her dainty handkerchief about my wrist and, borrowing a bottle from the hostess, simultaneously poured hamamelis on my injured wrist and words of gentle and healing sympathy into my waiting ear. The last was so pleasant that I almost wished that I had seen double and caught the ball on both wrists.

A picnic is a most excellent place to differentiate between male and female human nature. When a man goes to a picnic, and bosses the job himself, he takes for lunch two or three sandwiches and a banana, and eats them as soon as he gets there, then spends the rest of the day communing with nature and in varied recreations. A woman thinks she must exercise the same lavish hospitality and elaborate table service at a picnic that she does at home. No sooner has the Hall Club determined the date of the picnic than she begins to order eatables for it. The night before she makes up a quantity of sandwiches of every conceivable size, shape, and composition, with other things to go

with them. In the morning she packs the family clothes basket with the good things she has provided, not forgetting to put in sundry table ware and twice as many napkins and doilies as there are members of her household. She repeatedly cautions her husband to be sure to use his napkin, which he does, then puts it in his pocket and forgets all about it. She wonders all summer what has become of her best napkin, and late in the fall when putting away his summer suit, as she is tucking moth balls in the pockets, she finds the missing napkin.

When the party reaches the grounds the husbands and the children disperse seeking amusement, while the women begin immediately to prepare for lunch. They seek a shady spot under the spreading branches of some giant tree, and spread out their shawls, waterproofs and other clothing for table cloths and arrange the food according to the most approved etiquette. They forget that the sun moves westward fifteen degrees per hour so when everthing is ready the shady spot has become the hottest place on the ranch, and everything has to be done over. About eleven o'clock the husbands and children, ravenously hungry, begin to clamor for food, but are told they can have nothing till all is arranged. About one they are ready and when the men have eaten twice as much as they ought, then, the toastmistress says: "O, Doctor, you must try one of my raspberry tarts." And the president of the club says "I have made some doughnuts by a new prescription and you must all try them." And before they are through every member of the club insists that every other member's husband must sample some of her cooking. And when at last they all have eaten all they can possibly hold they gather up twelve baskets full of fragments which they take home to live on for the remainder of the week. Yet, notwithstanding the idiosyncrasies of women, picnics are of great value to those who attend. There is a freedom from the formal rules of society which permits men and women to come into closer touch with each other, and because of this freedom many a casual acquaintance has become a permanent friendship. For intellectual comradeship and heart communion, a single day at a picnic is worth a thousand years of those formal social functions at which a great mass of people, having put on their best clothes with reluctance, crowd into some residence in impossible numbers, crush past the host with eager haste to reach the dining room, eat several dishes of ices and other indigestible food and rush home with relief.

It would be an interesting historical study to determine when this insane custom first arose, and a still more psychological study to decide why men and women of seeming sense in this enlightened age, continue to suffer at formal social functions.

I find from the dictionary that the word picnic means an excursion away from somewhere. Having been more or less in touch with the work of this club from the beginning I have been interested to observe how it has taken a picnic away from its original purpose of child study. This change of purpose has been a great relief to the children of the club. Since every woman has her independent ideas as to the nurture and training of a child, and since every member of this club sincerely endeavors to put in practice all she learns from her associates, just think what an awful calamity it would have been to the children of the club if all the combined ideas of these thirty women had been practised upon the innocent offspring of the club.

The enlarged work of the club has not only made the members more lovely, if possible, but has reacted upon the husbands and I observe a marked improvement in them in these years. Perhaps it may be permissible to remark here that probably nowhere in the wide world can there be found thirty men, brought together by any

combination of circumstances, who combine so many points of perfection, manly beauty, intellectual strength, spiritual loveliness, as possessed by the composite husband of the Hall Club.

I suppose that most men, distinguished in the world of achievement, attribute a large share of their success to the influence of their mothers. If you will carefully analyze the tribute each great man pays his mother you will find that he holds her memory in holy reverence, not because of what she did, though she may have made heroic sacrifices for his education and his opportunity, but for what she was.

There is, occasionally, a woman in the ordinary walks of life who rises above the routine of daily tasks, onerous though they may be, and comes into touch with the divine. She not only passes on to her child through the law of inheritance, her own intellectual supremacy, but by her standard of living inspires him to do his level best in the work of the world.

So, I believe, by the intellectual power gained through a knowledge of the best literature, by the culture that comes from the study of nature and art, by the graciousness attained by the exchange of social courtesies, by all the varied work of the club the members are becoming mothers who are exercising that undefined influence over their children which inspires them to live lives of high attainment and generous service.

I thank you, Madam Toastmistress, for this opportunity to lay my tribute at the feet of the Hall Club.

Mrs. Orr then said:

The Hall Club can boast of 87 children. Is not that a magnificent showing?

Of the 87 children, 42 are girls, of whom we are exceedingly proud. Somebody has called the girls the "Easter lilies of the world" and truly so.

From among all our members, who can more appropriately speak for our girls than the mother of four charming daughters?

It gives me great pleasure to present Mrs. George S. Clarke, an ex-president of the Club, who will respond to the toast, "Our Girls."

Mrs. Clark made an interesting address upon this subject, which has not been furnished for publication.

The toastmistress then said:

We read in the Old Testament that "Nathan being sick, trusted not in the Lord, but sent for a physician,—and Nathan was gathered unto his fathers."

Now, if Nathan had lived in this age of specialists, he might have prolonged his life many years.

The medical science has made great strides since these early days, and many maladies can be cured in a short time, which proved fatal centuries ago.

Although the gentleman rather objected to "talking shop," it is with pleasure that I introduce Ernest V. Scribner, M. D., husband of our honored vice-president, who has consented to respond to the toast, The Healing Art.

Dr. Scribner then made a few amusing remarks upon "The Healing Art" as practiced by the husbands of the Hall Club.

The next speaker was introduced as follows:

When Mr. Aldrich was asked to respond to the toast, The Boys, it was not because of his large family of boys, for he is the fond father of a beautiful little girl, but because of his intimate relation with many boys in his profession.

In living among several hundred boys, one must surely become acquainted with many kinds and feel at home with them.

They may be the Apaches of the street, the law breakers to-day, but tomorrow they are the law makers and are always the sweethearts of the mothers.

It is with pleasure that I present Mr. Fred D. Aldrich, who will speak for The Boys.

Mr. Aldrich spoke on the traits of boys as he had observed them.

Dr. Bell was introduced as follows:

It is not every club which can boast of an University President, Dean of a College, college professors, eminent divine, distinguished lawyers, renowned physicians, successful business men—and a poet.

We have always been singularly fortunate and to-night greatly honored by hearing a poem written especially for this occasion, and it is with very great pleasure that I present to you, Dr. R. Mowry Bell, who will read a poem which he has written especially for us.

### Child Study

Dr. R. Mowry Bell

As some bowed verger with his pan and broom,
Whose earth-bent eyes the light of day bewilders,
Toils in a gray cathedral's sculptured gloom,
Oblivious to the art of vanished builders;

So often, blindly, day and week and year
Our life rolls on: the round of custom holds us:
We spin through space on our enchanted sphere,
Unmindful of the magic that enfolds us.

Each night the stars look down to rouse our awe:
A marvel is each day, each truth of science,
Held in the clutch are we of mighty law,
Which meets our keenest searchings with defiance.

No wonder equals this, that—in a sense—
With the Creator's touch we mingle ours.
Well the great Artist knows our impotence,
Yet bids us aid him with our feeble powers.

Over His shoulder as He works we gaze;
See beauties grow and formlessness diminish:
Often—O marvel!—in our hands He lays
A half-made human soul for us to finish!

No worthier task exists than opening eyes
And ears to the magic of this world of beauty:
No nobler field of interest than lies
In showing little feet the paths of duty.

We call them ours, these children at our knee:
We teach as we were taught by those who bore us;
But we ourselves are children, and we see
Our lack of fitness for the task before us!

Leaders and sculptors are we all perforce,
To shape the taste, to guide the wise decision;
And we would question wisdom at its source,
And gaze on beauty with the master's vision!

And we would gather in from far and nigh
Food for the mind, pure intellectual leaven;
And keep a window open to the sky,
That souls may pasture on the fields of heaven!

"What's in a name?" When we decided to call our little club "Hall," we did not fully realize how great a name we had selected. It has proved to be almost a fairy wand—for we have had many distinguished educators speak to us, all delighted to help, for in helping us, they were learning our Patron Saint, Dr. Hall.

It is with very great honor that I now introduce Dr. G. Stanley Hall. who responds to the toast, Life's Joys, for who knows more about the joys of life, or who has drunk more deeply from the cup of life than our honored Dr. Hall?

Dr. Hall expressed his great satisfaction at being present and declared that the honor done him by giving his name to the Club was more than he deserved, and suggested that this was the proper time, as the Club was to enter upon a larger sphere of activity in its second decade, to give it a more distinctive name.

In closing the exercises Mrs. Orr said:

I ask you all to drink with me to the health of the founder of the Hall Club, for to her we must give not only the success of the Club, but the success of this evening, Mrs. Joseph Knight Greene.

It is one of the white moments of our life when we can in some way show our appreciation of one who has ever been our friend, counsellor and inspiration, and I ask you to drink with me to our Patron Saint, Dr. G. Stanley Hall, for whom the Club was named. Although there are forty-nine present here this evening, still a number of our members have been detained, some by illness, some by absence from town, others by circumstances over which we have no control, and I ask you to drink with me to our absent members.

Never were the rhymes—

"It's hard for you-uns and we-uns,
It's hard for we-uns to part;
It's hard for you-uns and we-uns,
Cause you-uns have we-uns hearts,"

more true than to-night, and it is with regret that we must separate, but looking forward to our next Father's night.

# LITERATURE

*Moral Instruction and Training in Schools*, edited by M. E. Sadler. Longmans, Green & Co., London, 1908. 2 vols.

This is a report of an inquiry by a committee working on the basis of a circular. It is impossible to do justice to such a book in a brief review. Some of the chapters are written by very eminent men, such as Professor Eucken, on the problem of moral instruction; Professor Findley, on the growth of moral ideas in children; Professor John Adams, on precept versus example; Dr. Muirhead, on the religious foundations of moral education; Dr. Maher, on Catholic ideas and purpose; Mr. J. H. Bradley, on moral training in the secondary schools; Mr. Cecil Grant, on the relative failure of the English public schools; Mr. Legge, industrial and physical training. Among other topics are several on moral instruction in France, Germany, and other countries for the different grades; and there are various symposia on such topics as how the ethical efficiency of education could be increased, on women teachers and moral education, on evidence as to its efficacy, on the preparation of teachers for the work, on Sunday Schools, and adult moral training. Besides the thirty-three chapters and the reports from different countries, there is a bibliography, a list of investigators and of those who gave oral evidence, accounts of the cost, etc.; so that the work as it stands is a thesaurus of both theory and practice.

*L'education de la femme*, par M. C. SCHUYTEN. Octave Doin, Paris, 1908. 458 p.

This eminent expert in school hygiene sums up many of his conclusions in a book of great weight. In the first part, dealing with physical education, he résumés the studies of bodily measurement, muscular force, right-handedness, and each of the organs of sense. In the second part, on intellectual and moral education, he treats of the intellectual destiny of woman and discusses feminism and the immediate, psychic influences of the school, intellectual fatigue, methods of studying it and conclusions, the modes of measuring intelligence and the analysis of juvenile minds, the differences between the morning and the afternoon hours for study, and the branches of education. In the third part, he deals with domestic education and elaborates an ideal programme, with a final chapter on the proper modern initiation to puberty and maternity, and the duties of husband and wife.

*Woman under Socialism*, by AUGUST BEBEL, Tr. from the German by Daniel De Leon. Labor News Co., New York, 1904. 371 p.

This work is called by the translator "the best aimed shot at the existing social system, both strategically and tactically considered," for the woman question is the weakest link in the capitalist's mail. Woman before Christianity is contrasted unfavorably with her condition under this influence. The chief topics are sexual instinct, wedlock, checks and obstructions to marriage, numerical proportion of the sexes—its causes and effects, prostitution necessary in a capitalist world, woman as bread winner, her civic and political status, the socialization of society, woman in the future, over population, etc.

*The Study of Nature*, by SAMUEL C. SCHMUCKER. J. B. Lippincott Co., Philadelphia, 1908. 315 p. (Lippincott's Educational Series.)

Dr. Schmucker has been for many years one of the most successful popular lecturers in the field of nature study and appreciation, and here with the aid of Mrs. Schmucker he brings together some of his material. He regards the world spirit as the influence of Providence upon the soul, and the whole race as at school to these supernatural forms. Environment and not law has moulded man into his present status. Words name but do not engender ideas; only things can give them. The teacher is to preside over the advancement of these normative influences of nature on the soul. He should first of all desire to kindle and increase the love of nature. This is set forth in the preface by the editor of the series. The work itself is in three sections: Theory, the material, and the course. Under the first we study what nature is, its general aim, purpose, the teacher's preparation, work in the schoolroom, work in equipment of the school and subjects suitable for nature study. In the second section, insects, water-dwellers, frogs, toads, reptiles, birds, domestic and wild animals, the general life of plants, their reproduction, and, finally, the heavens are considered. The third section contains only two chapters: One a course in nature study, the other, helpful books. The work is enriched by fifty-four cuts, and a few full page colored pictures.

*Northern Trails*, by WILLIAM J. LONG. Books I and II. Ginn & Co., Boston, 1908. (Wood Folk Series, Books VI and VII.)

In these books, the frontispiece is the picture of a wolf-dog with one snap laying bare the heart of a large deer, one of the causes for which the author was classed as a "nature fakir". The author also prints three letters confirmatory of this incident by people who have lived among wolves. In general, the stories of these books are very humanistic. In our humble opinion, the author should represent humanization of animal life as his forte, rather than accurate observation. We note that in one volume, he represents a salmon springing up a waterfall and just where the water begins to drop. At the top of the fall the salmon is well out of the water and turning a curve from a vertical to a horizontal direction in the air. This, we submit, is not only contrary to observation as to how the salmons leap falls, but represents an impossible way of doing so. Observations agree that, while the salmon may leap out of the water and plunge into the falls a little way above the surface, they always swim over the lip of the fall.

*An Alabama Student, and other Biographical Essays*, by WILLIAM OSLER. Henry Frowde, New York, 1908. 334 p.

The author has had a life-long interest in biography as a recreation, and has a strong conviction of its value in education, so that when he has had an occasional outside address to give, it is in this field that he has chosen his subject. Nearly all have been printed. All the men treated are physicians, save only John Keats, "the apothecary poet." Half of them are Americans. The first essay, which gives the title to the book, is on Dr. J. Y. Bassett, a humble but very original man. The other men treated are: Thomas Dover; O. W. Holmes; Locke as a physician; Elisha Bartlett; "a backwood physiologist" Beaumont, who studied the famous case of Alexis St. Martin; Louis, the great French teacher of many eminent American physicians; William Pepper; Alfred Stillé; Sir Thomas Browne; Fracastorius; Harvey and his discovery.

*Old Indian Legends*, retold by Zitkala-Sa. Ginn & Company, Boston, n. d. 165 p.

These legends are relics of our country's once virgin soil. They are

tales that aboriginal children love to hear by the night-fire. All the elements were personified and the whole world centred in the wigwam. The writer heard these stories in her youth. Often one helped the other restore lost links. These old legends belong quite as much to the white man as to the Indian for the two are much alike at heart. There are fourteen tales, each with its illustration. The fact that the author is a native Indian adds very much to the natural interest of these tales, which she certainly has the fine art of telling. Some are not entirely new, but the burden of the book is so.

*My Story*, by HALL CAINE. William Heinemann. London, 1908. 406 p.

The most pedagogical part of this admirable autobiography is the author's account of his childhood days in the Isle of Man. Here he lived in a thatched cottage, heard no end of tales of fairies, witches, witch doctors, evil eyes, and verily believed that merry little fellows, wearing cocked hats and velvet jackets, pranced about in the marsh, some of them favorable and some malicious. The earth and air were full of all sorts of supernatural influences. The primitive patriarchal life, this author loves to paint, and some of his best characters and most striking incidents were derived from his own observations of the Manx people. They were a litigious lot, very gossipy, with no poor laws, no insane asylums for idiots, and lunatics wandered at large and were cared for by their neighbors. The bank was represented by a parish money-lender; the religious life was "more vocal than active" and a curious mixture of sincerity and grotesqueness. Drink was the great evil. Many an old custom was kept up. A rich life, indeed, it was for a boy.

*Some Characteristics of Childhood*, by ALICE RAVENHILL. E. J. Arnold & Son, Leeds and Glasgow, n. d. 70 p.

It is well that the author reprinted her articles from "The Guardian" and added a little to them. Here we find discussed general characteristics of child life, elementary requirements of infants, food, nurture, growth and development, educational needs, place of play, traits of adolescence, and a bibliography; all in seventy pages. The author has herself made an interesting study of the average hours of sleep of the different ages, from infancy to sixteen, basing her data upon 4,521 girls and 3,935 boys in the elementary schools of England. One striking feature is that from twelve to fifteen inclusive, girls sleep about one hour more than boys; from seven to twelve years of age, boys fall from ten to eight hours; and the actual time of both is at all ages below the standard. Until nine, twelve hours in bed is not too long; and until six or seven, a mid-day rest of from one to three hours is important; eleven hours is no more than the rapidly growing boy or girl of twelve need, especially if there is a good deal of activity; "indeed the conventional hours of maturity could be advantageously postponed till twenty-one." Among the majority of children there is now a very serious deficiency of sleep, even amounting to one-fourth during the entire period of childhood, because noises and other factors interfere. Insufficient sleep amounts to overwork, and sleep is the best insurance against nervous diseases and insanity. The other topics on which data are compiled are well treated. The book is, on the whole, an admirable compend to place in the hands of parents.

*A Study of Mathematical Education, including the Teaching of Arithmetic*, by BENCHARA BRANFORD. The Clarendon Press, Oxford, 1908. 392 p.

This study is based on twenty years' experience in school and col-

lege, and ranges from the very elements of accounting to honor students in our universities. The writer has given lecture courses on the teaching of mathematics for many years. Among the twenty-four chapters, lectures, or lessons, are measurements, points in the history of arithmetic, development of numbering in the race, experiments in teaching geometry to the blind, sub-conscious experience, origin and development of mathematics, physiological considerations, evolution of axioms, genesis of geometry, etc. The book cannot fail to be of interest and value to teachers of mathematics of all grades.

*Life Questions of High School Boys*, by JEREMIAH W. JENKS. The Young Men's Christian Association Press, New York, 1908. 139 p.

These brief outlines of discussions are based on experiences as both teacher and father. They deal with the great questions that must come before boys, viz., the relations of high school to life, custom, habit, societies, cliques, fraternities, liquor and tobacco, slang and profanity, lying, cheating and graft, gambling and betting, sex, attitude toward work, the self-centred man, social service, politics, success, religion. References and blank pages for notes on each topic are inserted. An outline of the topic is presented with quotations, and questions are asked to be answered by the boys. It is a valuable manual.

*Education and Industrial Evolution*, by FRANK TRACY CARLTON. The Macmillan Co., New York, 1908. 320 p.

The chief topics treated in this work are: the educational epochs in the United States, the relation between educational advance and industrial progress, new aims, ideals and methods, the education of woman and her relation to industry, manual training, laboratory work, the Arts and Crafts movement, organized labor and education, etc. The second part treats of actual or present conditions of the educational system, viz., industrial, trade, technical, agricultural, commercial, continuation, truant, juvenile delinquent schools, new projects, and finally the school of the future.

*The Administration of Public Education in the United States*, by SAMUEL T. DUTTON and DAVID SNEDDEN. The Macmillan Co., New York, 1908. 595 p.

This is a valuable memoir. It discusses factors favoring the advance of education, the national government's relation to the same, the State and education, administration, city systems, financiering, schoolhouses, text-books, supplies, superintendence, teaching staff and its importance, supervision, courses, grading, promotion, administration of each class of schools including those for defectives, evening schools, compulsory education and child labor, discipline, government statistics, school and society, etc.

*The Hard Palate in Normal and Feeble-minded Individuals*, by WALTER CHANNING and CLARK WISSLER. Anthropological papers of the American Museum of Natural History, Vol. I, Pt. V, pp. 283-349.

This is a very valuable monograph, and the result of years of painstaking study. The comparisons of measurement include the type of palate for normal and for feeble-minded individuals, its height, growth, relations to dentition, character of the distributions, relations to head measurements, comparison by qualitative gradations, measurements on skeletal material, etc., etc. For a study of sub-normal types, this paper deserves to be called a classic.

*The Age of Mental Virility*, by W. A. NEWMAN DORLAND. The Century Co., New York, 1908. 229 p.

This book describes the world's chief workers and thinkers, the period of mental activity, the unusual activity in the young—its acme and duration, what the world might have missed, genius and insanity, and the brain of genius.

*Carla Wenckebach, Pioneer*, by MARGARETHE MÜLLER. Ginn & Co., Boston, 1908. 290 p.

The subject of this biography was for many years well known as the professor of German at Wellesley College. The writer's first motive for preparing this sketch was a desire "to share a precious possession which had come to her through a deep appreciation of an unusual and very vital human being;" and the second, is because this life represents a type of increasing prominence, viz., "that of a woman in whose mental make up sex does not appear to be of prime and decisive importance." Her instincts were intellectual rather than domestic. Among the very many restless German women who, during the past half century, have left their fatherland to seek a larger, freer field, perhaps no one has done more for her people or won more distinction, and none have been less conscious of their own achievement. The work is illustrated by no less than seven portraits which show the subject of the sketch at various stages of life.

*Pestalozzi, by* H. HOLMAN. Longmans, Green & Company, New York, 1908. 322 p.

Long ago Steinmüller wrote, "A teacher without psychology does his work as badly as an old woman doctoring," and Pestalozzi said, "I want to psychologize instruction." This volume seeks to provide the student and teacher with material for thoughtful survey of the principles and practice of one of the greatest world's pioneer educators. The effort is to set forth clearly, what Pestalozzi wrote, thought and did, rather than what the author of this book thinks he said and did; hence it abounds in quotations. In the sixteen chapters he treats the spirit of the times, early years, beginning of work, Pestalozzi as a literary man, his career at Stanz, Burgdorf and Yverdun, the death-song, then treats Pestalozzi as a man and thinker, a teacher of language, form, number, etc., his theories and what he really did, with text-books and references for further reading.

*The Boys' Round Table*, by WILLIAM BYRON FORBUSH and FRANK LINCOLN MASSECK. 6th edition. Frank L. Masseck, Potsdam, N. Y., 1908. 188 p.

This manual of the Knights of King Arthur is a precious message to boys. It contains the history and plan of the order, tells how to conduct a castle, describes a model constitution, the conclave, the first three degrees, the siege perilous, the peerage, form for coronation, for instituting a new castle, suggestive methods, books, pictures, games, music, castles in school, the queen of Avalon, the brotherhood of David, Woodcraft Indians, the captains of ten, and ends with songs, music, apparatus, and price thereof, and a copious ritual. This is without doubt, on the whole, perhaps, the very best organization for boys before and in the early teens.

*A Study in Doctrine and Discipline*, by HENRY W. WILBUR. Friends' Book Association, Philadelphia, 1908. 48 p.

This is an admirable epitome of the general point of view of the Friends or Quakers. It characterizes the inner light and compares it with the Holy Spirit, and tells us their ideas of the ministry, of worship, and the conduct of life.

*The Rural School in the United States*, by JOHN C. HOCKENBERRY. Published by the author, State Normal School, Westfield, Mass., 1908. 124 p.

This is an interesting and careful study of economic and social conditions of present-day rural communities, or a comparison of schools with earlier days, with Prussia, with the city school, and, finally, the picture of the rural school of the future, as the author believes it is to be.

*The Road to Damascus*, By H. A. MITCHELL KEAYS. Small, Maynard & Co., Boston, 1907. 447 p.

This is a novel of unusual interest. It deals in a broad, large way with the sex question, all the important crises in the book turning upon facts and acts about which people will be sure to differ, according to their moral standard. Whatever may be said about the latter, it is a work of great ability, the conversations are wrought out with remarkable skill, and the interest is maintained to the end.

*The Little Brown Brother*, by STANLEY P. HYATT. Henry Holt & Co., New York, 1908. 329 p.

This is a plain story with no ulterior political motive or attempt to point any special moral or plead any special case, because it is based on things the author had seen in the Philippine Islands and is, to a large extent, historical. In the story, pictures of life and conditions on the Islands are abundantly introduced.

*Text-book of School and Class Management*, by FELIX ARNOLD. The Macmillan Co., New York, 1908. 409 p.

The writer first treats of the teacher; self-activity, individuality, rights and duties; then of the principal, following the same captions; then of co-operation between the principal and teacher; its general and special means, approval and disapproval vs. uniform methods, etc. This topic is treated under three heads: instruction, discipline, and supervision. Under the latter head, the factors in efficiency are discussed, both in instruction and discipline. In the second part, the relation between the teacher and child is discussed in the pre-adolescent, adolescent, self-active and individual child, with captions on child's rights. The number of adolescents in the elementary school he finds more than double the number in the High School. They are most numerous in the last two years of the elementary grades and are distributed all through the school grades, but are especially numerous from the fourth year up. Later come chapters on the nature of conduct; its sanction, kinds, development, general and special, etc. On the whole, this is a book "made to pattern"; that is, it gives the impression of having been first deliberately planned as a systematic whole, with the captions wrought out, and then these dry bones are clad with flesh. At any rate, like books thus made, it has nearly every degree of merit in its different parts from highest to lowest. It is, on the whole, a rather abstract and hypermethodic book, gravitating in the treatment of subjects strongly to the merely theoretic and away from concrete modes of treating the various subjects. The author evidently strives above all to be symmetrical, and the writer of this note, in looking over the book and references is by turns now surprised, now instructed, to find references to theoretical treatises he never heard of and to find omissions of things which to him seem essential. This is, by no means, necessarily a negative criticism, but it does show a great incommensurability between two minds, so great that it would be very hard for either to do justice to the other. And

so the writer forbears a more extended review, which he is tempted to make.

*Differential and Integral Calculus*, by DANIEL A. MURRAY. Longmans, Green & Co., New York, 1908. 491 p.

The topics in this book are arranged for primary courses in calculus in which the formal division into differential and integral is deemed necessary. The work is largely made up of matter from the author's Infinitesimal Calculus, although there have been many changes in the treatment of several topics, and additional matter has been introduced.

*A Text-Book of Experimental Chemistry*, by EDWIN LEE. Blakiston's Son & Co., Philadelphia, 1908. 433 p.

While no particular claim to originality is made for this text-book, still it is more than a compilation and strives to embody a clear presentation of the fundamentals of the science, specific directions for laboratory work, with questions and discussions, and application enough to direct observation and to serve as a basis for generalization. It is not designed to take the place of a large, descriptive work, but is vitally related to the classroom.

*A Text-Book of Physics*, edited by A. Wilmer Duff. P. Blakiston's Son & Co., Philadelphia, 1908. 680 p. (Blakiston's Science Series.)

With six associates the author has edited this very impressive work with 511 illustrations. It represents an attempt to prepare a text-book more satisfactory to its editors than any existing one. The field of physics has enormously increased of late, due to many fresh discoveries and new facts, although the capacities of students have probably not increased in any like proportion. The size of the text-book, however, if essential features are presented, must be gradually enlarged. Physics is now so specialized that it was almost inevitable that several collators should combine their work in order to cover the general field. The present book seems to be admirable, therefore, not only for the classroom but for reference.

*Electricity, Sound and Light*, by ROBERT A. MILLIKAN and JOHN MILLS. Ginn & Co., Boston, 1908. 383 p.

This book represents, primarily, an attempt to secure satisfactory articulation of the laboratory and classroom phases of instruction in physics. It is based on the conviction that real insight and grasp of principles are not readily gained unless theory and laboratory work are very closely combined. This is, however, far more than a laboratory manual. It seeks to give a good, logical development of the topics treated, and the method is analytical rather than descriptive and it is assumed that the apparatus required will be found in most laboratories. The work is well illustrated with 250 cuts.

*First Course in Biology*, by L. H. BAILEY and WALTER M. COLEMAN. The Macmillan Co., New York, 1908. 164 p.

This book assumes that the tendency in secondary education is away from the formal, technical completion of separate subjects and toward the development of a workable training in the activities that relate the pupil to his own life. In natural science, the tendency is to attach less importance to botany, zoölogy, and physiology as such, and to lay greater stress upon the processes and adaptations of life as expressed in plants and animals. This tendency is a revolt against the laboratory and the research method of the college, as it has been impressed in the common schools, for it is not unusual for the pupil

to study botany without really knowing plants, or physiology without really knowing himself. Unit courses are taking the place of dry, meaningless, isolated courses as a result of the nature study movement. This volume is an effort to meet the needs of a simple, untechnical text, and its work stands between unorganized nature study of the lower grades and the formal science of advanced courses. It assumes that the work in this field will generally begin in the fall, and the matter is so arranged, but it can be begun at any season of the year. The book is furnished with four or five hundred cuts and these seem to the present reviewer admirably adapted to their purpose. All possible applications, too, are made to daily life. The scale of animate existence is followed from below upward.

*Lesson Stories for Kindergarten Grades*, by LOIS S. PALMER. The Macmillan Co., New York, 1908. 127 p.

This book is the outgrowth of the experience of many years' work with children in the kindergarten of day and Sunday school, and is designed to teach reverence, trust, love, thankfulness, unity, obedience, to arouse the desire for truth, etc. The lessons are by topics and by grades; for instance, the creation story has a memory verse, song, home work, and illustrative study and story material; then follows a lesson treatment with many hints and suggestions.

*Literature in the Common Schools*, by JOHN HARRINGTON COX. Little, Brown & Co., Boston, 1908. 227 p.

This book is the result of five years' experience with teachers in the summer school of the West Virginia University and in teachers' institutes in several states. It is an attempt to meet needs as they arise. Its general nature can be inferred from the headings of its chief chapters, which are as follows: Reading; Literature and Life; Why Study Literature? Criticism; The Distinguishing Marks; The Emotional Element; Imagination; Thought; Form; Application of Tests; Tributaries of the Literary Stream; Presentation in the Primary Grades; The Story in the Upper Grades; A Model Lesson; Course of Study; Extended List for Substitution, Leisure Hours, and Home Reading; Bibliography; For Teachers; List of Publishers; Index of Titles and Authors.

*Composition and Rhetoric*, by CHARLES S. THOMAS and WILL D. HOWE. Longmans, Green & Co., New York, 1908. 509 p.

This work is not to train writers in the finer graces of language, but to enable young students to write more clearly and forcibly. The main stress is placed upon the word, sentence, and paragraph. Practice is placed before rules.

*Extempore Speaking for School and College*, by EDWIN DUBOIS SHURTER. Ginn & Co., Boston, 1908. 176 p.

This book is the result of practice and experience in the classroom and is designed for school and college and adapted to both teachers and students. It deals with the different ways of preparing and delivering addresses, the advantages of extempore speaking, general and special preparation, oral presentation, and types.

*Specimens of Exposition and Argument*, MILTON PERCIVAL and R. A. JELLIFFE. The Macmillan Company, New York, 1908. 362 p.

This volume, while disclaiming new theories, claims certain practical features that should help those studying exposition and argument. The selections vary in length, in mode of treatment, and the variety of interest is greatly diversified. The new features claimed are the examples of controversy, which shows how opposite sides of

the same question may be handled. There is a good little treatise on introductions and the brief. First, come narrative and descriptive, then the more expository types, illustrated by an essay, describing process. Then the differences beteen definition and analysis are treated and finally particular types and criticisms.

*Brave Beowulf*, edited by Thos. Cartwright. William Heinemann, London, 1908. 113 p. (Every Child's Library.)

This is the best prose, child's version of this oldest written poem in the Anglo-Saxon language. It is illustrated by eight interesting, colored, full-page illustrations and by a number of wood-cuts. There is a glossary with pronunciation of important, proper names at the end.

*Time in English Verse Rhythm*, by WARNER BROWN. The Science Press, New York, 1908. 75 p. (Archives of Psychology, No. 10, May, 1908.) (Columbia Contributions to Philosophy and Psychology, Vol. XVII, No. 2.)

The methods of studying verse rhythm are by the ear, phonograph, tapping, reaction, subjective, and experimental methods. In this way, the graphic method, and mechanical aids, pitch, intensity and relation, time relations, theories of the metrists and poets, relations as treated by experimentalists, and the general significance of results reached are studied.

*Pride and Prejudice*, by JANE AUSTEN. Edited by Josephine Woodbury Heermans. The Macmillan Co., New York, 1908. 388 p.

This remarkable novel, written in 1796 when its author was not twenty-three years of age, waited fifteen years for a publisher and has had a remarkable vitality. It is here reproduced with her life, with various appreciations, bibliographic references, etc.

*A French Grammar*, by HUGO P. THIEME and JOHN R. EFFINGER. The Macmillan Co., New York, 1908. 411 p.

The design of the authors has not been to write a complete French grammar, but to present things most essential to a general knowledge of French, with plenty of illustrative material, so that the student may derive a maximum of profit by whatever system he is taught. The treatment of subjects is consecutive; verbs, for instance, are treated in detail and together. Composition exercises, conversation drill, vocabularies and French history, all have unique treatment.

*Sudermanns Dramen*, von KARL KNORTZ. G. E. Stechert & Co., New York, 1908. 80 p.

This is perhaps the most drastic and able criticism which this extremely popular dramatist has received in his own country or elsewhere, and is an able and readable book.

*Inquiry in High Places, as revealed in the American-Spanish, Filipino Wars of 1898, 1899 and subsequent years*, by HENRY CLAY KINNE. Pub. by the author, San Francisco, 1908. 294 p.

This is a most scathing indictment and exposure of corruption and iniquity, provided the author's data and conclusions are correct. He seems to have a special hatred of President McKinley.

*Bibliography of Education for 1907*, compiled by James I. Wyer, Jr., and Martha L. Phelps. Gov't Printing Office, Washington, 1908. 65 p. (U. S. Bureau of Education, Bulletin, 1908, No. 3.)

*A Bibliography of Physical Training*, by J. H. MCCURDY. G. E. Stechert & Co., New York, 1905. 369 p.

*The Specialist Blight on American Education*, by JAMES P. MUNROE. Rep. from The Popular Science Monthly, Vol. LXXIII, Oct., 1908. 11 p.

*The School City*, a New System of Moral and Civic Training. National City School League, Philadelphia, Boston and Washington, n. d. 44 p.

*First Report of the New York State Probation Commission*, for six months ending December 31, 1907. J. B. Lyon Co., Albany, 1908. 214 p.

*Child Culture*, by NEWTON N. RIDDELL. Child of Light Pub. Co., Chicago, Ill., n. d. 129 p.

*Systematic Study in the Elementary Schools*, by LIDA BELLE EARHART. Published by Teachers College, Columbia University, New York City, 1908. 97 p. (Columbia University Contributions to Education, Teachers College Series, No. 18.)

*Tuberculosis in the United States*. Prepared for the International Congress on Tuberculosis, Washington, 1908. (Deparment of Commerce and Labor.)

*From Keel to Kite*, by ISABEL HORNIBROOK. Lothrop, Lee & Shepard Co., Boston, 1908. 511 p.

*The Lighted Lamp*, by C. HANFORD HENDERSON. Houghton, Mifflin & Co., Boston, 1908. 418 p.

*The Coming of People*, by CHARLES F. DOLE. Homecrofters Guild of the Talisman, Watertown, Mass., 1897. 299 p.

*Annales de Instrucción Primaria*, Vol. V, May-December, 1907. Mariñ y Caballero, Montevideo, 1908. 561 p.

*Outlines of Economics*, by JOHN DANIELS. Ginn & Co., Boston, 1908. 28 p.

*Practical Exercises in Physical Geography*, by WILLIAM MORRIS DAVIS. Ginn & Co., Boston, 1908. 148 p. (With atlas.)

*The New Hudson Shakespeare*, edited and revised by Ebenezer C. Black and Andrew J. George. Ginn & Co., Boston, 1908.

*Der Besuch im Karzer*, von ERNST ECKSTEIN and *Das edle Blut*, von ERNST von WILDENBRUCH. With notes, vocabulary and exercises by Charles H. Sanborn. Ginn & Co., Boston, 1908. 239 p.

*Brigitta*, von BERTHOLD AUERBACH. With introduction, notes, exercises and vocabulary, by J. Howard Gore. Ginn & Co., Boston, 1908. 165 p.

*Träumereien an französischen Kaminen-Märchen* von RICHARD von VOLKMANN-LEANDER, selected, arranged and edited with introduction, notes, exercises and vocabulary, by J. B. E. Jonas and Anne T. Weeden. Ginn & Co., Boston, 1908. 243 p.

*Macmillan Pocket Classics edition of Shakespeare*. The Macmillan Co., New York, 1908.

*The Attica of Pausanias*, edited by MITCHELL CARROLL. Ginn & Co., Boston, 1907. 293 p. (College Series of Greek Authors.)

*Latin Lessons for Beginners*, by DANIEL W. LOTHMAN. Ginn & Co., Boston, 1908. 178 p.

*The Teaching of Elementary Latin*, by FRANKLIN HAZEN POTTER. Benjamin H. Sanborn Co., Boston, 1908. 55 p.

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